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CS33-43.
Knit Underwear (Exclusive of Rayon).

U. S. DEPARTMENT OF COMMERCE

JESSE H. JONES, Secretary

NATIONAL BUREAU OF STANDARDS

LYMAN J. BRIGGS, Director

KNIT UNDERWEAR

(Exclusive of Rayon)

(SECOND EDITION)

COMMERCIAL STANDARD CS33-43

(Supersedes CS33-32)

Effective Date for New Production from July 30, 1943



**A RECORDED VOLUNTARY STANDARD
OF THE TRADE**

UNITED STATES
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PROMULGATION

of

COMMERCIAL STANDARD CS33-43

for

KNIT UNDERWEAR (EXCLUSIVE OF RAYON)

(Second Edition)

On February 19, 1931, a general conference of representative manufacturers, distributors, and users adopted a commercial standard for Knit Underwear (Exclusive of Rayon), which was subsequently accepted by the trade and promulgated as Commercial Standard CS33-32, effective for new production from January 1, 1932.

On March 3, 1942, the Underwear Institute requested that the commercial standard be revised. Accordingly, a revision that included 30 additional garments was circulated for acceptance. Those concerned have since accepted and approved the revised standard as shown herein for promulgation by the U. S. Department of Commerce, through the National Bureau of Standards.

The standard is effective for new production from July 30, 1943.

Promulgation recommended.

I. J. Fairchild,
Chief, Division of Trade Standards.

Promulgated.

Lyman J. Briggs,
Director, National Bureau of Standards.

Promulgation approved.

Jesse H. Jones,
Secretary of Commerce.

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KNIT UNDERWEAR (EXCLUSIVE OF RAYON)

(Second Edition)

COMMERCIAL STANDARD CS33-43

PART I. GENERAL

1. *Purpose.*—This standard is established for the guidance of producers, distributors, and users to eliminate confusion in measurements and methods of measuring knit underwear (exclusive of rayon) and provides standard measurements and methods to serve as a basis for guaranteeing full size.

2. *Scope.*—This standard covers standard methods of measuring and standard measurements for knit underwear (exclusive of rayon) for boys, children, infants, men, and women. It includes recommended symbols for designating different models, underwear box sizes, cone colors for single cotton yarns, methods of washing wool and wool-cotton underwear, and a recommended uniform wording of a label to guarantee full size.

3. *Application and size designations.*—The methods and measurements given herein are applicable to finished garments as delivered by the manufacturer. All measurements are in inches. Unless otherwise indicated, "size (inches)" refers to basic body measurements (chest or waist). It is of course understood that the word "Age", when used as a size designation, does not mean that the garment indicated will fit every individual of that age.

PART II. METHODS OF MEASURING—GENERAL

4. The garment to be measured is laid out without tension on a smooth flat surface so that creases and wrinkles will not affect the measurements. A steel tape is recommended as being more convenient and accurate than other ordinary measuring devices.

5. *Accuracy.*—Measurements are taken to the nearest eighth of an inch.

BANDS—INFANTS'

6. *Width of garment.*—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 1.)

7. *Total length.*—Measured from center of shoulder strap to bottom edge of garment. (From *A* to *B*, fig. 1.)

8. *Width of shoulder strap.*—Measured across strap. (From *E* to *C*, fig. 1.)

9. *Length of shoulder strap.*—Measured from point where shoulder strap joins body of garment to top edge of strap. (From *D* to *G*, fig. 1.)

10. *Circumference of armhole.*—Measured around armhole. (From *F* to *N*, fig. 1.)

11. *Circumference of neck opening.*—Measured around neck opening (fig. 1).

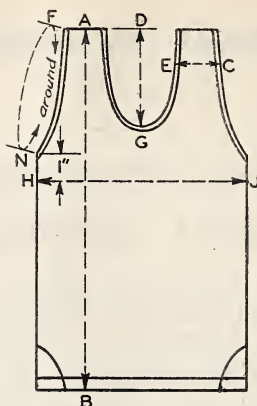


FIGURE 1.—Bands—infants'.

DRAWERS—BOYS', CHILDREN'S AND MEN'S RIBBED AND FLAT KNIT

12. *Total length.*—Measured from outside edge of waistband to outside lower edge of leg cuff. (From *A* to *B*, fig. 2.)

13. *Waist.*—Twice the distance between the outside edges of waistband when garment is buttoned and spread out smoothly. (Twice *A* to *C*, fig. 2.)

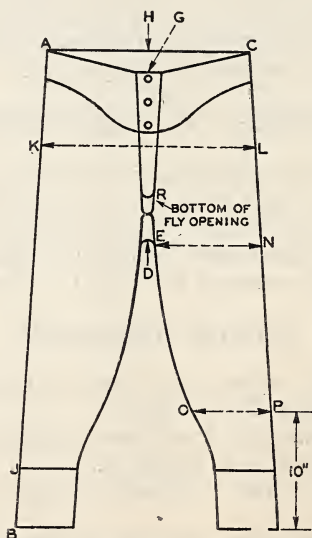


FIGURE 2.—Drawers—boys', children's and men's ribbed and flat knit.

14. *Width across seat.*—Measured across back of garment at a point half-way between bottom of crotch and top edge of waistband. (From *K* to *L*, fig. 2.)

15. *Width of thigh.*—Measured across leg at bottom of crotch. (From *E* to *N*, fig. 2.)

16. *Width of calf.*—Measured across leg at point 10 inches above bottom of leg cuff. (From *O* to *P*, fig. 2.)

17. *Front rise.*—Measured from bottom of crotch up front of buttoned garment to middle point of front edge of waistband. (From *D* to *G*, fig. 2.)

18. *Back rise.*—Measured from bottom of crotch up back of garment to middle point of back edge of waistband. (From *D* to *H*, fig. 2.)

19. *Front opening.*—Measured from bottom point of opening at fastening to top edge of waistband, garment buttoned. (From *R* to *G*, fig. 2.)

20. *Leg cuff length.*—Measured from middle of seam attaching cuff to leg to outside bottom edge of cuff. (From *J* to *B*, fig. 2.)

SHIRTS—BOYS', CHILDREN'S, AND MEN'S RIBBED AND FLAT KNIT

21. *Width of garment.*—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 3.)

22. *Total length.*—Measured from a point where shoulder joins collarette or neck opening to bottom edge of shirt. (From *A* to *B*, fig. 3.)

23. *Sleeve length.*—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve cuff. (From *F* to *G*, fig. 3.)

24. *Armhole length.*—Measured from the point where sleeve is attached to shoulder to lowest point under arm. (From *F* to *N*, fig. 3.)

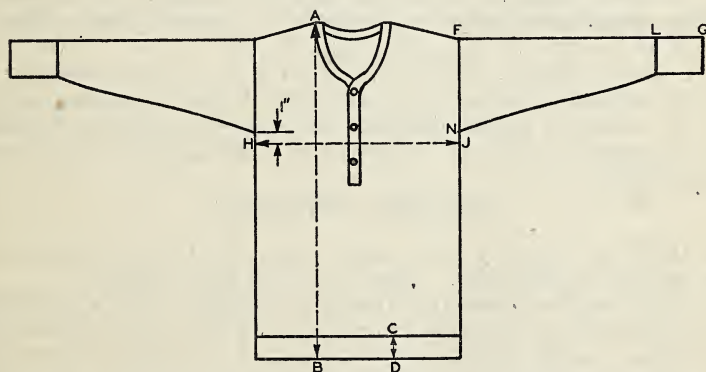


FIGURE 3.—Shirts—boys', children's, and men's ribbed and flat knit.

25. *Sleeve cuff length.*—Measured from middle of seam attaching cuff to sleeve to upper outside edge of cuff. (From *L* to *G*, fig. 3.)

26. *Neck opening.*—Measured from center of button around lower edge of neck opening to outside end of buttonhole. (From *X* to *Y*, fig. 7, A.)

27. *Border rib length.*—(For flat knit wool and wool mixed shirt only.) Measured from middle of seam attaching rib to edge of shirt to bottom edge of border rib. (From *C* to *D*, fig. 3.)

SHIRTS, ATHLETIC—BOYS' AND MEN'S RIBBED (1×1) PANEL RIBBED, SWISS RIBBED, AND FLAT KNIT

28. *Width of garment.*—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 4.)

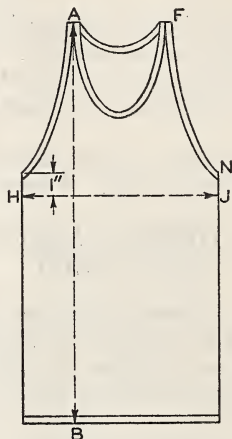


FIGURE 4.—Shirts, athletic—boys' and men's ribbed (1 × 1) panel ribbed, swiss ribbed, and flat knit.

29. *Total length.*—Measured from center of shoulder strap to bottom edge of shirt. (From *A* to *B*, fig. 4.)

30. *Armhole length.*—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm. (From *F* to *N*, fig. 4.)

31. *Collaretté length.*—Measured from point where shoulder joins collaretté around inner edge of collaretté back to starting point, or twice the distance across aperture of collaretté opening secured by grasping opposite sides of collaretté and bringing the two opposite edges parallel.

SHIRTS—INFANTS'

32. *Width of garment.*—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, figs. 5 and 6.)

33. *Total length.*—Measured from point where top of shoulder joins neck opening to bottom edge of garment. (From *A* to *B*, figs. 5 and 6.)

34. *Sleeve length* (long or short sleeves).—Measured from point under arm where sleeve is seamed to garment to lower outer edge of sleeve. (From *F* to *G*, figs. 5 and 6.)

35. *Armhole length.*—Measured from point where sleeve is attached to shoulder to lowest point under arm. (From *F* to *N*, figs. 5 and 6.)

36. *Circumference of neck opening.*—Measured from point where top of shoulder joins neck opening around opening and back to starting point, garment buttoned. (From *A* to *D* and around back to *A*, figs. 5 and 6.)

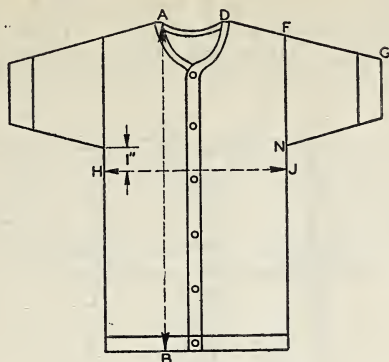


FIGURE 5.—Shirts—infants'.

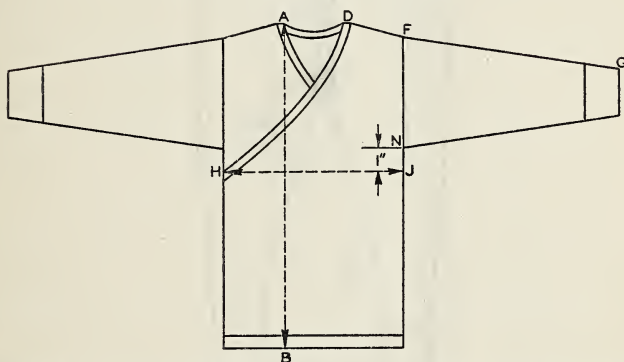


FIGURE 6.—Shirts—infants' high neck, long sleeve, double-breasted.

UNION SUITS—BOYS', CHILDREN'S AND MEN'S RIBBED AND FLAT KNIT

37. *Width of garment.*—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 7.)

38. *Trunk.*—Twice the distance from point where shoulder joins collarette to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch. (Twice *C* to *D*, fig. 7.)

39. *Total length.*—Measured from point where shoulder joins collarette to outside bottom edge of leg cuff. (From *A* to *B*, fig. 7.)

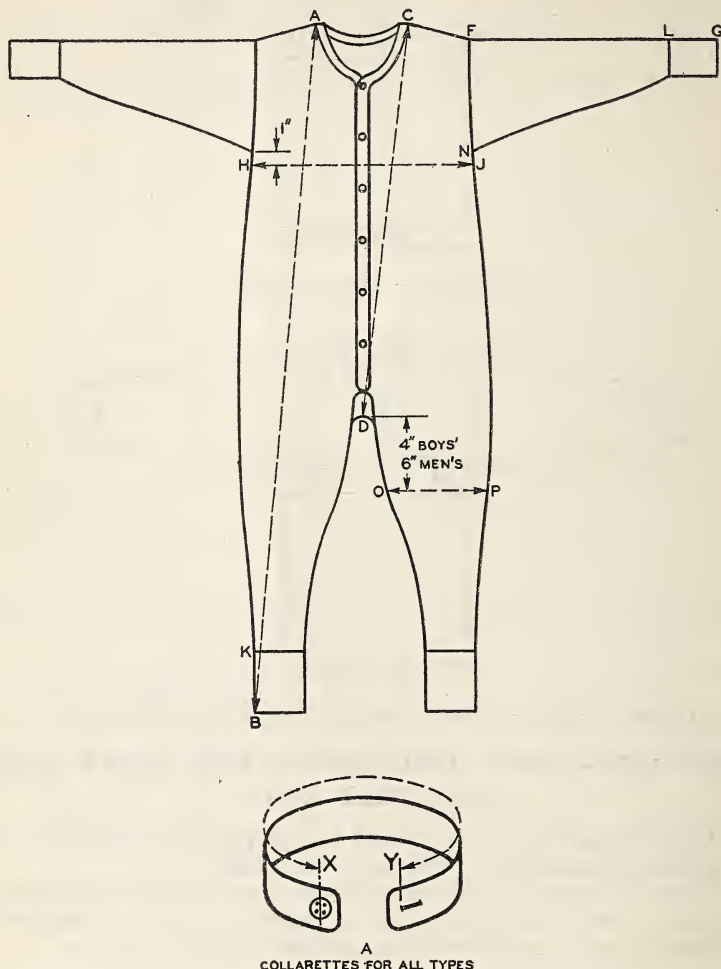
40. *Width of leg.*—Measured across leg of suit 4 inches below point *D*, fig. 7, for boys' and children's suits, and 6 inches below point *D*; figure 7, for men's suits. This measurement must equal one-half width of garment within tolerance of 1 inch, plus or minus. (From *O* to *P*, fig. 7.)

41. *Sleeve length.*—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve cuff. (From *F* to *G*, fig. 7.)

42. *Armhole length.*—Measured from point where sleeve is attached to shoulder to lowest point under the arm. (From *F* to *N*, fig. 7.)

43. *Leg cuff length*.—Measured from middle of seam attaching cuff to leg to outside bottom edge of cuff. (From *K* to *B*, fig. 7.)

44. *Sleeve cuff length*.—Measured from middle of seam attaching cuff to sleeve to upper outside edge of cuff. (From *L* to *G*, fig. 7.)



COLLARETTES FOR ALL TYPES

FIGURE 7.—Union suits—boys', children's, and men's ribbed and flat knit.

45. *Collarette length*.—Measured from center of collarette button around lower edge of collarette to outside end of buttonhole. (From *X* to *Y*, fig. 7, A.)

UNION SUITS, ATHLETIC—BOYS' AND MEN'S RIBBED (1×1) PANEL RIBBED, SWISS RIBBED, AND FLAT KNIT

46. *Width of garment*.—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 8.)

47. *Trunk*.—Twice the distance measured from point where shoulder joins collarette to center of bottom line of gusset at crotch. Spread

legs in measuring only sufficiently to adjust crotch. (Twice *C* to *D*, fig. 8.)

48. *Total length*.—Measured from center of shoulder strap to bottom edge of leg. (From *A* to *B*, fig. 8.)

49. *Width across bottom of leg*.—Measured across leg along lower edge.

50. *Armhole length*.—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm. (From *F* to *N*, fig. 8.)

51. *Collarett length*.—Measured from point where shoulder joins collarett around inner edge of collarett back to starting point, or

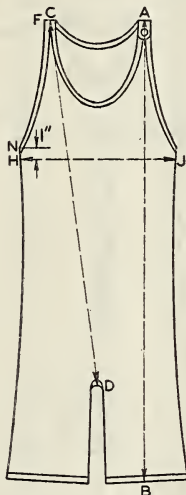


FIGURE 8.—Union suits, athletic—boys' and men's ribbed (1×1) panel ribbed, swiss ribbed, and flat knit.

twice the distance across aperture of collarett opening secured by grasping opposite sides of collarett and bringing the two opposite edges parallel.

UNION SUITS—WOMEN'S RIBBED (1×1)

52. *Width of garment*.—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 9.)

53. *Trunk*.—Twice the distance measured from point where shoulder joins neck opening to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch. (Twice *C* to *D*, fig. 9.)

54. *Total length*.—Measured from point where shoulder joins neck opening to bottom edge of leg or leg cuff if cuff is used. (From *A* to *B*, fig. 9.)

55. *Width of leg*.—Measured across leg of suit 6 inches below point *D* (fig. 9) and must equal one-half width of garment within tolerance of 1 inch, plus or minus. (From *O* to *P*, fig. 9.)

56. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve or sleeve cuff if cuff is used. (From *F* to *G*, fig. 9.)

65. *Armhole length*.—Measured from top point of armhole of shoulder along outer edge of armhole to lowest point under arm. (From *F* to *N*, fig. 10.)

66. *Neck opening*.—Measured around inner edge of neck opening.

67. *Waist*.—Twice the distance measured across the garment at the narrowest point of the body of the garment. (Twice *S* to *T*, fig. 10.)

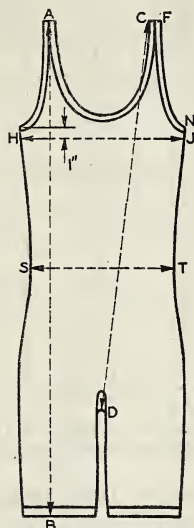


FIGURE 10.—Union suits—women's ribbed (1×1) cotton, low neck, no sleeves, knee length, built-up shoulder, tight knee.

UNION SUITS—WOMEN'S RIBBED (1×1) COTTON

MEDIUM WEIGHT, DUTCH NECK, ELBOW SLEEVE, KNEE LENGTH,
BUTTON FRONT

68. *Width of garment*.—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 11.)

69. *Trunk*.—Twice the distance measured from point where shoulder joins neck opening to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch. (Twice *C* to *D*, fig. 11.)

70. *Total length*.—Measured from point where shoulder joins neck opening to bottom edge of leg. (From *A* to *B*, fig. 11.)

71. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve or sleeve cuff, if cuff is used. (From *F* to *G*, fig. 11.)

72. *Armhole length*.—Measured from point where sleeve is attached to shoulder to lowest point under arm. (From *F* to *N*, fig. 11.)

73. *Sleeve cuff length*.—Measured from middle of seam attaching cuff to sleeve to upper outside edge of cuff if cuff is used. (From *L* to *G*, fig. 11.)

74. *Neck opening*.—Measured from center of neck opening button around inner edge of neck opening to outside end of buttonhole.

75. *Waist*.—Twice the distance measured across the garment at the narrowest part of the body of the garment. (Twice *S* to *T*, fig. 11.)

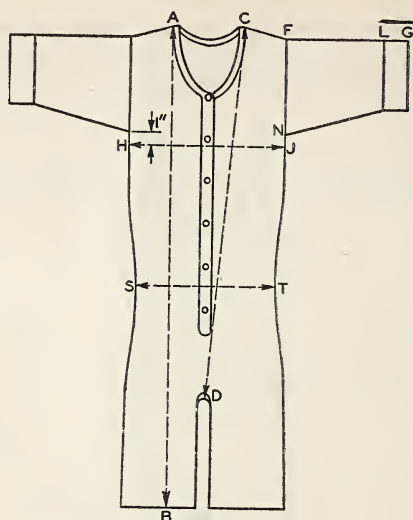


FIGURE 11.—Union suits—women's ribbed (1×1) cotton, medium weight, dutch neck, elbow sleeve, knee length, button front.

VESTS—CHILDREN'S AND WOMEN'S RIBBED (1×1) AND SWISS RIBBED STRAIGHT

76. *Width of garment*.—Measured across garment 6 inches below bottom of armholes. (From *H* to *J*, fig. 12.)

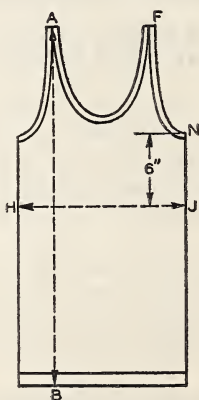


FIGURE 12.—Vests—children's and women's ribbed (1×1) and swiss ribbed straight.

77. *Total length*.—Measured from top edge of shoulder strap to bottom edge of vest. (From *A* to *B*, fig. 12.)

78. *Armhole length*.—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm (one-half length of armhole band). (From *F* to *N*, fig. 12.)

79. *Neck opening.*—Measured from point where shoulder joins neck opening around inner edge of neck opening back to starting point or twice the distance across aperture of neck opening secured by grasping opposite sides of neck opening and bringing the two opposite edges parallel.

PART III. BOYS' GARMENTS—STANDARD MEASUREMENTS AND METHODS IN DETAIL

COATS, SPORT—FLAT COTTON FLEECE LINED

WINDBREAKER AND BUTTON FRONT TYPE

METHOD OF MEASURING

80. *Width of garment.*—Measured across buttoned or closed garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 13.)

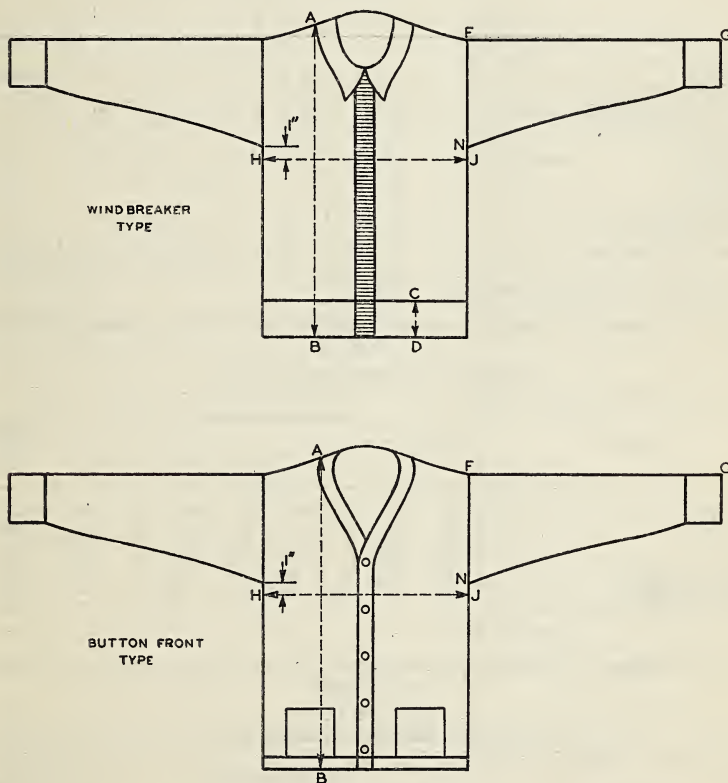


FIGURE 13.—Coats, sport—boys' flat cotton fleece-lined.
Windbreaker and button front types.

81. *Total length.*—Measured from point where shoulder joins collar on windbreaker type or stolling on button front type, to bottom edge of garment. (From *A* to *B*, fig. 13.)

82. *Sleeve length.*—Measured from lowest point under arm to lower outside edge of sleeve. (From *F* to *G*, fig. 13.)

[illegible]

TABLE 4.—*Drawers—Standard measurements for boys' ribbed (1×1) cotton, ankle length*

(U. I. B-9)

Method of measuring, paragraphs 12-20

Location	Age (approximate)								Tolerances (plus or minus)
	2	4	6	8	10	12	14	16	
Total length.....	23	26	29	32	36	39	40	41	1 inch.
Waist.....	24	25	26	27	28	29	30	31	Do.
Front rise.....	11	11½	12	13	13½	14½	15	15	¾ inch.
Back rise.....	12	12½	13	14	14½	15½	16	16	Do.
Width of thigh.....	4½	4½	5½	5½	6½	6½	7	7	½ inch.
Length front opening.....	8	8	8½	8½	9½	9½	10	10	Do.
Drawer cuff length (if cuff is used).....	5	5	5	5	5	5	5	5	Maximum.

TABLE 5.—*Shirts—Standard measurements for boys' flat knit cotton*

(U. I. B-10)

Method of measuring, paragraphs 21-27

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment (all gages)-----	10	11	12	13	14	15	16	17	6 percent.
Total length-----	14	16	18	20	22½	24½	27	29	1 inch.
Sleeve length-----	11	12	13	14	15	16½	18	19½	Do.
Armhole length-----	5	5½	6	6	6½	7	7	7½	Do.
Sleeve cuff length (if cuff is used)-----	5	5	5	5	5	5	5	5	Maximum.
Neck opening-----	13	13	14	14	14	15	15	15	1 inch.
Quarter sleeve length-----	5	5	5	5	6	6	6	6	1½ inches.

TABLE 6.—*Shirts—Standard measurements for boys' flat knit wool and wool-cotton*

(U. I. B-11)

Method of measuring, paragraphs 21-27

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment (all gages).....	10	11	12	13	14	15	16	17	6 percent.
Total length.....	15	17	19	21	23½	25½	28	30	1 inch.
Sleeve length.....	12	13	14	15	16	17½	19	20½	Do.
Armhole length.....	5½	6	6½	6½	7	7½	8	8	Do.
Sleeve cuff length (if cuff is used).....	5	5	5	5	5	5	5	5	Maximum.
Neck opening.....	13	13	14	14	14	15	15	15	1 inch.

TABLE 7.—Shirts—Standard measurements for boys' ribbed (1×1) cotton

(U. I. B-9)

Method of measuring, paragraphs 21-27

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment:									
7, 8, 9, 10 cut	9 ³ / ₄	9 ³ / ₄	10 ¹ / ₂	10 ¹ / ₂	11 ¹ / ₄	12	12 ¹ / ₂	13 ¹ / ₄	6 percent.
11, 12, 14 cut	9 ¹ / ₄	9 ¹ / ₄	10	10	10 ³ / ₄	11 ¹ / ₂	12	12 ³ / ₄	Do.
Total length	15	17	19	21	23 ¹ / ₂	25 ¹ / ₂	28	30	1 inch.
Sleeve length:									
For military nonelastic shoulder	12	13	14	15	16	17 ¹ / ₂	19	20 ¹ / ₂	Do.
For lap seam elastic shoulder	11	12	13	14	15	16 ¹ / ₂	18	19 ¹ / ₂	Do.
For set-in shoulder									
Armhole length	5	5 ¹ / ₂	6	6	6 ¹ / ₂	7	7	7 ¹ / ₂	³ / ₄ inch.
Sleeve cuff length (if cuff is used)	4	4	4	4	4	4	4	4	Maximum.
Collarette length	14	14	15	15	15	16	16	17	1 inch.
Quarter sleeve length	5	5	5	5	6	6	6	6	1 ¹ / ₂ inches.

¹ Sleeve lengths for set-in shoulder shall be the same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder, with tolerance of 1 inch plus or minus.

TABLE 8.—Shirts, Athletic—Standard measurements for boys' knit pullover shirt, ribbed (1×1) and flat knit

(U. I. B-12)

Method of measuring, paragraphs 28-31

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6 — 8		10 — 12		14 — 16		
Small ¹			Medium ¹		Large ¹				
For ribbed shirts only									
Width of garment:									
Rib knit (1×1).....	8¾	8¾	9¼	9¾	10¼	10¾	11¼	11¾	6 percent. Do.
Flat knit.....	10	10	11	11	12	13	14	15	
Total length:									
Rib knit (1×1).....	16	18	20	22	24½	26½	29	31	1 inch. Do.
Flat knit.....	15	17	19	21	23½	25½	28	30	
Armhole length.....	7½	8	8½	9	9½	10	10½	11	Do.
Collarette length.....	20	21	22	23	24	25	26	26	2 inches.

¹ Wherever the "small," "medium," and "large" designations are used to cover 2 or more numbered sizes, the measurements used should be the average of the standard measurements of the numbered sizes covered by the designation. Thus for the total length of boys' ribbed athletic shirts where the "medium" designation is used to cover sizes 28 and 30, the total length used as a standard for the "medium" designation should be the average of 24½ and 26½ inches or 25½ inches. The same tolerances should apply as used for the numbered sizes. In this case, with a tolerance of plus or minus 1 inch allowed, the "medium" shirt may measure in total length from 24½ to 26½ inches.

TABLE 9.—Shirts, Athletic—Standard measurements for boys' panel ribbed (needle out) knit pullover

[From fabric made on latch needle machines with other than swiss cams]

(U. I. B-13)

Method of measuring, paragraphs 28-31

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6 — 8		10 — 12		14 — 16		
Small ¹			Medium ¹		Large ¹				
Width of garment: Panel rib.....	8¼	8¼	9	9	9¾	9¾	10½	10½	6 percent. 1 inch. Do. 2 inches.
Total length.....	16	18	20	22	24½	26½	29	31	
Armhole length.....	7½	8	8½	9	9½	10	10½	11	
Collarette length.....	20	21	22	23	24	25	26	26	

Wherever the "small," "medium," and "large" designations are used to cover 2 or more numbered sizes, the measurements used should be the average of the standard measurements of the numbered sizes covered by the designation. Thus for the total length of boys' panel-ribbed athletic shirts where the "medium" designation is used to cover sizes 28 and 30, the total length used as a standard for the "medium" designation should be the average of 24½ and 26½ inches or 25½ inches. The same tolerances should apply as used for the numbered sizes. In this case with a tolerance of plus or minus one inch allowed, the "medium" shirt may measure in total length from 24½ to 26½ inches.

TABLE 10.—Shirts, Athletic—Standard measurements for boys' swiss ribbed pullover

(U. I. B-14)

Method of measuring, paragraphs 28-31

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6—8		10—12		14—16		
			Small ¹	Medium ¹	Large ¹				
Width of garment: 12 cut..... 14 cut..... Total length..... Armhole length..... Collarette length.....	7 6½ 18 7½ 20	7 6½ 20 8 21	7½ 7 22 8½ 22	7½ 7 24 9 23	8 7½ 26 9½ 24	8 7½ 28 10 25	8½ 8 30 10½ 26	8½ 8 31 11 26	10 percent. Do. 1 inch. Do. 2 inches.

¹ Wherever the "small," "medium," and "large" designations are used to cover 2 or more numbered sizes, the measurements used should be the average of the standard measurements of the numbered sizes covered by the designation. Thus for the total length of boys' swiss ribbed athletic shirts where the "medium" designation is used to cover sizes 28 and 30, the total length used as a standard for the "medium" designation should be the average of 26 and 28 inches, or 27 inches. The same tolerances should apply as used for the numbered sizes. In this case, with a tolerance of plus or minus 1 inch allotted, the "medium" shirt may measure in total length from 26 to 28 inches.

SHIRTS, POLO—BOYS' KNITTED

METHOD OF MEASURING

86. *Width of garment*.—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 14.)

87. *Total length*.—Measured from point where shoulder joins collar to bottom edge of shirt. (From *A* to *B*, fig. 14.)

88. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve cuff. (From *F* to *G*, fig. 14.)

89. *Armhole length*.—Measured from point where sleeve is attached to shoulder to lowest point under arm. (From *F* to *N*, fig. 14.)

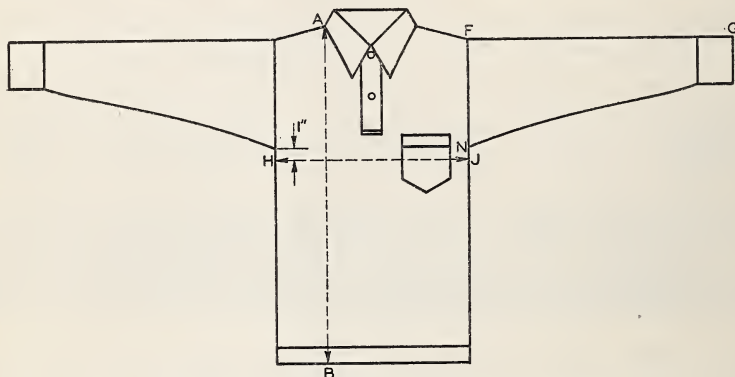


FIGURE 14.—Shirts, polo—boys' knitted.

90. *Collar length*.—Measured from center of collar button around neck band to outside end of buttonhole.

TABLE 11.—Shirts, Polo—Standard measurements for boys' flat knit all-wool
(U. I. B-17)

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment.....	10	10	11	12	13	14	15	16	6 percent. 1 inch.
Total length.....	15	16½	18	19½	21	22½	24	25	
Sleeve length:									
Long.....	13	14	15	16	17	18	19	20	Do.
Short.....	5½	5½	6	6	6½	6½	7	7	Do.
Armhole length.....	6	6	6½	6½	7	7	7½	8	Do.
Collar length.....	10½	11	11½	12	12½	13	13½	14	Do.

TABLE 12.—*Shirts, Polo—Standard measurements for boys' flat knit cotton and worsted-cotton*

(U. I. B-17)

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment.....	10	10	11	12	13	14	15	16	6 percent. 1 inch.
Total length.....	14	15½	17	18½	20	21½	23	24	
Sleeve length:									
Long.....	13	14	15	16	17	18	19	20	Do.
Short.....	5½	5½	6	6	6½	6½	7	7	Do.
Armhole length.....	6	6	6½	6½	7	7	7½	8	Do.
Collar length.....	10½	11	11½	12	12½	13	13½	14	Do.

TABLE 13.—*Shirts, Polo—Standard measurements for boys' flat knit wool-cotton*

(U. I. B-17)

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment.....	10	10	11	12	13	14	15	16	6 percent. 1 inch.
Total length.....	15	16½	18	19½	21	22½	24	25	
Sleeve length:									
Long.....	13	14	15	16	17	18	19	20	Do.
Short.....	5½	5½	6	6	6½	6½	7	7	Do.
Armhole length.....	6	6	6½	6½	7	7	7½	8	Do.
Collar length.....	10½	11	11½	12	12½	13	13½	14	Do.

TABLE 14.—*Shirts, Polo—Standard measurements for boys' ribbed (1×1) cotton*

(U. I. B-17)

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment:									6 percent. 1 inch.
12, 14 cut.....	9½	9½	10½	10½	11½	11½	12½	12½	
Total length.....	14	15½	17	18½	20	21½	23	24	
Sleeve length:									
Long.....	13	14	15	16	17	18	19	20	Do.
Short.....	5½	5½	6	6	6½	6½	7	7	Do.
Armhole length.....	6	6	6½	6½	7	7	7½	8	Do.
Collar length.....	10½	11	11½	12	12½	13	13½	14	Do.

[illegible]

TABLE 16.—Union Suits—Standard measurements for boys' flat fleece

(U. I. B-4)

Method of measuring, paragraphs 37-45

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment (all gages)-----	10	11	12	13	14	15	16	17	6 percent.
Trunk-----	37	40	43	46	49	52	55	58	1½ inches.
Total length (ankle)-----	29	32	36	40	44	48	51	54	Do.
Width of leg (all gages)-----	5	5½	6	6½	7	7½	8	8½	1 inch.
Sleeve length-----	11	12	13	14	15	16	17	18	Do.
Armhole length-----	5½	6	6½	6¾	7	7½	8	8	¾ inch.
Leg cuff length-----	5	5	5	5	5	5	5	5	Maximum.
Sleeve cuff length-----	4	4	4	4	4	4	4	4	Do.
Collarette length-----	14	14	15	15	15	16	16	17	1 inch.

TABLE 17.—Union Suits—Standard measurements for boys' flat knit cotton

(U. I. B-2)

Method of measuring, paragraphs 37-45

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment (all gages).....	10	11	12	13	14	15	16	17	6 percent.
Trunk.....	38	41	44	47	50	53	56	59	1½ inches.
Total length (ankle length suit) ¹	30	33	37	41	45	49	52	55	Do.
Width of leg (all gages).....	5	5½	6	6½	7	7½	8	8½	1 inch.
Sleeve length:									
For military nonelastic shoulder.....	12	13	14	15	16	17½	19	20½	Do.
For lap seam elastic shoulder.....	11	12	13	14	15	16½	18	19½	Do.
For set-in shoulder ²									
Armhole length.....	5	5½	6	6	6½	7	7	7½	¾ inch.
Leg cuff length (if cuff is used).....	5	5	5	5	5	5	5	5	Maximum.
Sleeve cuff length (if cuff is used).....	4	4	4	4	4	4	4	4	Do.
Collarette length.....	14	14	15	15	15	16	16	17	1 inch.
Quarter sleeve lengths.....	5	5	5	5	6	6	6	6	1½ inches.
Length knee-length suit.....	23	25	27	29	31	33	35	37	Do.

¹ Total length of knee length and shorter suits may vary according to style.

² Sleeve lengths for set-in shoulder shall be the same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder with tolerance of 1 inch plus or minus.

TABLE 18.—*Union Suits—Standard measurements for boys' ribbed (1×1) cotton*

(U. I. B-1)

Method of measuring, paragraphs 37-45

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment:									
7, 8, 9, 10 cut	9¾	9¾	10½	10½	11¼	12	12¾	13½	6 percent.
11, 12, 14 cut	9¾	9¾	10	10	10¾	11½	12¾	13	Do.
Trunk	38	41	44	47	50	53	56	59	1½ inches.
Total length (ankle length suit) ¹	30	33	37	41	45	49	52	55	Do.
Width of leg:									
7, 8, 9, 10 cut	4¾	4¾	5¼	5¼	5½	6	6¾	6¾	1 inch.
11, 12, 14 cut	4¾	4¾	5	5	5¾	5¾	6½	6½	Do.
Sleeve length:									
For military nonelastic shoulder	12	13	14	15	16	17½	19	20½	Do.
For lap seam elastic shoulder	11	12	13	14	15	16½	18	19½	Do.
For set-in shoulder ²									
Armhole length	5	5½	6	6	6½	7	7	7½	¾ inch.
Leg cuff length (if cuff is used)	5	5	5	5	5	5	5	5	Maximum.
Sleeve cuff length (if cuff is used)	4	4	4	4	4	4	4	4	Do.
Collarett length	14	14	15	15	15	16	16	17	1 inch.
Quarter sleeve lengths	5	5	5	5	6	6	6	6	1½ inches.
Length knee-length suit	23	25	27	29	31	33	35	37	Do.

¹ Total length of knee length and shorter suits may vary according to style.² Sleeve lengths for set-in shoulder shall be the same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder, with tolerance of 1 inch plus or minus.TABLE 19.—*Union Suits—Standard measurements for boys' ribbed (1×1) worsted, worsted-merino, wool, and wool-cotton*

[Made from fabric that has been washed in the roll and then cut and seamed]

(U. I. B-3)

Method of measuring, paragraphs 37-45

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment:									
7, 8, 9, 10 cut.....	9¾	9¾	10½	10½	11¼	12	12¾	13½	6 percent.
11, 12, and 14 cut.....	9¼	9¼	10	10	10¾	11½	12¼	13	Do.
Trunk.....	38	41	44	47	50	53	56	59	1½ inches.
Total length (ankle length suit) ¹	30	33	37	41	45	49	52	55	Do.
Width of leg:									
7, 8, 9, 10 cut.....	4¾	4¾	5¼	5¼	5½	6	6¾	6¾	1 inch.
11, 12, and 14 cut.....	4½	4½	5	5	5¾	5¾	6½	6½	Do.
Sleeve length:									
For military nonelastic shoulder.....	12	13	14	15	16	17½	19	20½	Do.
For lap seam elastic shoulder.....	11	12	13	14	15	16½	18	19½	Do.
For set-in shoulder ²									
Armhole length.....	5	5½	6	6	6½	7	7	7½	¾ inch.
Leg cuff length (if cuff is used).....	5	5	5	5	5	5	5	5	Maximum.
Sleeve cuff length (if cuff is used).....	4	4	4	4	4	4	4	4	Do.
Collarett length.....	14	14	15	15	15	16	16	17	1 inch.
Quarter sleeve lengths.....	5	5	5	5	6	6	6	6	1½ inches.
Length knee-length suit.....	23	25	27	29	31	33	35	37	Do.

¹ Total length of knee length and shorter suits may vary according to style.² Sleeve lengths for set-in shoulder shall be the same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder, with tolerance of 1 inch plus or minus.

TABLE 20.—Union Suits, Athletic—Standard measurements for boys' flat knit cotton—no sleeves, button shoulder, short leg

(U. I. B-6)

Method of measuring, paragraphs 46-51

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment.....	10	10	11	11	12	13	14	15	6 percent.
Trunk.....	38	41	44	47	50	53	56	59	1½ inches.
Total length ¹	21	23	25	27	29	31	33	35	Do.
Armhole length.....	7½	8	8½	9	9½	10	10½	11	1 inch.
Collarette length.....	20	21	22	23	24	25	26	26	2 inches.

¹ Total length of athletic suits may vary according to style.

TABLE 21.—Union Suits, Athletic—Standard measurements for boys' panel ribbed—(needle out)—no sleeve, button shoulder, short leg

[Made from fabric on machines with other than swiss cams]

(U. I. B-7)

Method of measuring, paragraphs 46-51

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment.....	8¾	8¾	9½	9½	10	10½	11	11¾	6 percent.
Trunk.....	38	41	44	47	50	53	56	59	1½ inches.
Total length ¹	21	23	25	27	29	31	33	35	Do.
Armhole length.....	7½	8	8½	9	9½	10	10½	11	1 inch.
Collarete length.....	20	21	22	23	24	25	26	26	2 inches.

¹ Total length of athletic suits may vary according to style.

TABLE 22.—Union Suits, Athletic—Standard measurements for boys' ribbed (1×1) knit cotton—no sleeves, button shoulder, short leg

(U. I. B-5)

Method of measuring, paragraphs 46-51

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment.....	9¼	9¼	10	10	10½	11	11½	12¼	6 percent.
Trunk.....	38	41	44	47	50	53	56	59	1½ inches.
Total length ¹	21	23	25	27	29	31	33	35	Do.
Armhole length.....	7½	8	8½	9	9½	10	10½	11	1 inch.
Collarete length.....	20	21	22	23	24	25	26	26	2 inches.

¹ Total length of athletic suits may vary according to style.

TABLE 23.—*Union Suits, Athletic—Standard measurements for boys' swiss ribbed knit—no sleeve, button shoulder, short leg*

[Measurements herein given do not apply to fabrics made on flat bed machines]

(U. I. B-8)

Method of measuring, paragraphs 46-51

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment: 11 and 12 cut..... 14 cut.....	7½ 7	7½ 7	8 7½	8 7½	8½ 8	8½ 8	9 8½	9 8½	10 percent. Do.
Trunk.....	40	43	46	49	52	55	58	61	1½ inches.
Total length ¹	21	23	25	27	29	31	33	35	Do.
Armhole length.....	7½	8	8½	9	9½	10	10½	11	1 inch.
Collarette length.....	20	21	22	23	24	25	26	26	2 inches.

¹ Total lengths of athletic suits may vary according to style.

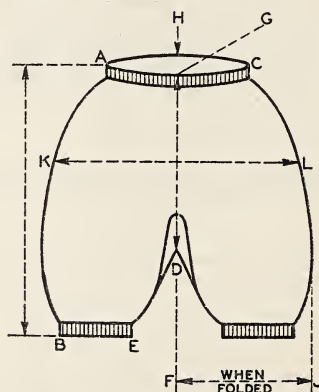
PART IV. CHILDREN'S GARMENTS—STANDARD MEASUREMENTS AND METHODS IN DETAIL

BLOOMERS—CHILDREN'S RIBBED (1×1)

ELASTIC WAIST BAND, ELASTIC AT KNEE

METHOD OF MEASURING

98. *Total length*.—Measured from outside edge of waist band (un-stretched) to bottom edge of leg. (From *A* to *B*, fig. 16.)

FIGURE 16.—*Bloomers—children's and women's ribbed (1×1) elastic waist band, elastic at knee.*

99. *Waist*.—Twice the distance measured between outside edges of waist band when elastic in waist band is not stretched. (Twice *A* to *C*, fig. 16.)

100. *Width across seat*.—Measured across back of garment halfway between bottom of crotch and top edge of waist band. (From *K* to *L*, fig. 16.)

101. *Width of leg at bottom.*—Measured across leg at bottom edge when elastic is not stretched. (From *B* to *E*, fig. 16.)

102. *Front rise.*—Measured from bottom of crotch up front of garment to middle point of front edge of waist band. (From *D* to *G*, fig. 16.)

103. *Back rise.*—Measured from bottom of crotch up back of garment to middle point of back edge of waist band. (From *D* to *H*, fig. 16.)

104. *Width across crotch.*—Measured at widest point of fold after garment has been folded in half lengthwise. (From *F* to *J*, fig. 16.)

TABLE 24.—*Bloomers—Standard measurements for children's ribbed (1×1)—elastic waist band, elastic at knee*

(U. I. C-12)

Location	Age (approximate)								Tolerances (plus or minus)
	2	4	6	8	10	12	14	16	
Total length.....	12½	13½	14½	15½	16½	17½	18½	19½	1 inch.
Waist.....	13	14	15	16	17	18	19	20	Do.
Width across seat.....	12¾	13½	14¼	15	15¾	16½	17¼	18	Do.
Width of leg bottom.....	4	4	4½	4½	5	5	5½	5½	½ inch.
Front rise.....	9½	10	10½	11	11½	12	12½	13	¾ inch.
Back rise.....	10½	11	11½	12	12½	13	13½	14	Do.
Width across crotch.....	7½	8	8	9	9	10	10	10½	½ inch.

PANTIES—CHILDREN'S TUCK STITCH KNEE LENGTH

METHOD OF MEASURING

105. *Total length.*—Measured from top outside edge of waist band to bottom edge of leg. (From *A* to *B*, fig. 17.)

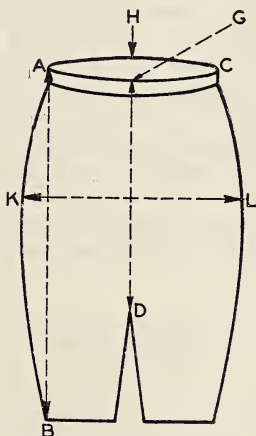


FIGURE 17.—*Panties—children's and women's tuck stitch, knee length.*

106. *Waist.*—Twice the distance between outside edges of waist band when elastic in waist band is not stretched. (Twice *A* to *C*, fig. 17.)

107. *Width across seat.*—Measured across back of garment half way between bottom of crotch and top edge of back waist band. (From *K* to *L*, fig. 17.)

108. *Front rise*.—Measured from bottom of crotch up front of garment to middle point of front edge of waist band. (From *D* to *G*, fig. 17.)

109. *Back rise*.—Measured from bottom of crotch up back of garment to middle point of back edge of waist band. (From *D* to *H*, fig. 17.)

TABLE 25.—*Panties—Standard measurements for children's tuck stitch—knee length*

(U. I. C-13)

Location	Age (approximate)								Tolerances (plus or minus)
	2 — 4		6 — 8		10 — 12		14 — 16		
	Infants'		Small		Medium		Large		
Total length ¹	12	12	14½	14½	16	16	17½	17½	1 inch.
Waist.....	13½	13½	15	15	16½	16½	18	18	Do.
Width across seat (all cuts).....	8	8	9	9	10	10	11	11	10 percent.
Front rise.....	9	9	10	10	11	11	12	12	1 inch.
Back rise.....	10	10	11	11	12	12	13	13	Do.

¹ Total lengths may vary according to style.

PANTS—CHILDREN'S RIBBED (1×1) AND FLAT KNIT COTTON

ANKLE AND KNEE LENGTH

METHOD OF MEASURING

110. *Total length*.—Measured from outside edge of waist band to bottom of leg. (From *A* to *B*, fig. 2.)

111. *Waist*.—Twice the distance between the outside edges of waist band when garment is buttoned. (Twice *A* to *C*, fig. 2.)

112. *Width across seat*.—Measured across back of garment at a point halfway between bottom of crotch and top edge of waist band. (From *K* to *L*, fig. 2.)

113. *Width of thigh*.—Measured across leg at bottom of crotch. (From *D* to *N*, fig. 2.)

114. *Front rise*.—Measured from bottom of crotch up front of buttoned garment to middle point of front edge of waist band. (From *D* to *G*, fig. 2.)

115. *Back rise*.—Measured from bottom of crotch up back of buttoned garment to middle point of back edge of waist band. (From *D* to *H*, fig. 2.)

TABLE 26.—*Pants—Standard measurements for children's flat knit cotton—ankle and knee length*

(U. I. C-11)

Location	Age (approximate)								Tolerances (plus or minus)
	2	4	6	8	10	12	14	16	
Total length:									
Ankle.....	19	21½	24	26½	29	32	35	38	1 inch.
Knee.....	12	13	15	16½	18	19	20	21	Do.
Waist.....	23	24	25	26	27	28	29	29	Do.
Width across seat.....	14	15	16	17	18	19	20	21	Do.
Width of thigh (ankle).....	5	5½	5½	6	6	6½	6½	7	6 percent.
Front rise.....	9½	10	11	12	12½	13½	14½	15½	¾ inch.
Back rise.....	10	10½	11½	12½	13	14	15	16	Do.

TABLE 27.—*Pants—Standard measurements for children's ribbed (1×1) cotton—ankle and knee length*

(U. I. C-10)

Location	Age (approximate)								Tolerances (plus or minus)
	2	4	6	8	10	12	14	16	
Total length:									
Ankle.....	20	22½	25	27½	30	33	36	39	1 inch.
Knee.....	13	14	16	17½	19	20	21	22	Do.
Waist.....	23	24	25	26	27	28	29	29	Do.
Width across seat.....	13	14	15	16	17	18	19	20	Do.
Width of thigh (ankle).....	4	4½	4½	5	5	5½	5½	6	6 percent.
Front rise.....	9½	10	11	12	12½	13½	14½	15½	¾ inch.
Back rise.....	10	10½	11½	12½	13	14	15	16	Do.

SLEEPING GARMENTS—CHILDREN'S RIBBED (1×1) AND FLAT KNIT

METHOD OF MEASURING

116. *Width of garment*.—Measured across garment 1 inch below bottom of armholes.

117. *Trunk*.—Twice the distance measured from point where shoulder joins collarette to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch.

118. *Total length*.—Measured from point where shoulder joins collarette to toe of foot, garment laid out flat.

119. *Width of ankle*.—Measured across leg where foot is joined to leg.

120. *Width of leg*.—Measured across leg at a point 4 inches below bottom of crotch.

121. *Length of foot*.—Measured from toe to heel of bottom of foot after toe is folded back.

122. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve, or if cuff is used, to upper outside edge of cuff, cuff folded back over sleeve.

123. *Armhole length*.—Measured from point where sleeve is attached to shoulder to lowest point under arm.

124. *Collarette length*.—Measured from center of collarette button around lower edge of collarette to outside end of button hole.

TABLE 28.—*Sleeping Garments—Standard measurements for children's ribbed (1×1) and flat knit*

(U. I. C-14)

Location	Size (numbers)										Tolerances (plus or minus)	
	0	1	2	3	4	5	6	7	8	9		10
	Age (approximate)											
			2		4		6		8			10
Width of garment:												
Ribbed (1×1)-----		9½	9½	10	10½	10½	11	11½	12	12	13	6 percent.
Flat knit-----	11	11	12	12	13	13	14	14	15	15	16	Do.
Trunk-----	36	37½	39	40½	42	43½	45	46½	48	49½	51	2 inches.
Total length-----	29	31	33	35	37	39	41	43	45	47	49	Do.
Width of ankle:												
Ribbed (1×1)-----	3¼	3¼	3½	3¾	4	4	4¼	4¼	4½	4½	4¾	½ inch.
Flat knit-----	3¾	3¾	4	4¼	4½	4½	4¾	4¾	5	5	5¼	Do.
Width of leg:												
Ribbed (1×1)-----	4½	4½	5	5	5½	5½	6	6	6½	6½	7	1 inch.
Flat knit-----	5	5	5½	5½	6	6	6½	6½	7	7	7½	Do.
Length of foot-----	6	6	6½	7	7	7½	8	8	8	9	9	½ inch.
Sleeve length-----	10½	10½	11½	12½	12½	14	14	15½	15½	17	17	1 inch.
Armhole length-----	5	5	5½	5½	6	6	6	6½	7	7	7	½ inch.
Collarete length-----	12	12	12	13	13	13	14	14	14	15	15	2 inches.

TABLE 29.—*Union Suits—Standard measurements for children's flat knit cotton*

(U. I. C-2)

Method of measuring, paragraphs 37-45

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment (all gages) -----	10	11	12	13	14	15	16	17	6 percent.
Trunk -----	38	41	44	47	50	53	56	59	1½ inches.
Total length (ankle length suit) ¹ -----	29	32	36	40	44	48	51	54	Do.
Width of leg (all gages) -----	5	5½	6	6½	7	7½	8	8½	1 inch.
Sleeve length:									
For military nonelastic shoulder -----	11	12	13	14	15	16½	18	19½	Do.
For lap seam elastic shoulder -----	10	11	12	13	14	15½	17	18½	Do.
For set-in shoulder ² -----									
Armhole length -----	5	5½	6	6	6½	7	7	7½	¾ inch.
Leg cuff length (if cuff is used) -----	5	5	5	5	5	5	5	5	Maximum.
Sleeve cuff length (if cuff is used) -----	4	4	4	4	4	4	4	4	Do.
Collarete length -----	14	14	15	15	15	16	16	17	1 inch.
Quarter sleeve lengths -----	5	5	5	5	6	6	6	6	1½ inches.
Length knee-length suit -----	23	25	27	29	31	33	35	37	Do.

¹ Total length of knee length and shorter suits may vary according to style.² Sleeve lengths for set-in shoulder shall be the same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder, with tolerance of 1 inch plus or minus.

TABLE 30.—Union Suits—Standard measurements for children's ribbed (1×1) cotton

(U. I. C-1)

Method of measuring, paragraphs 37-45

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment: 7, 8, 9, 10 cut..... 11, 12, 14 cut.....	9¾ 9¼	9¾ 9¼	10½ 10	10½ 10	11¼ 10¾	12 11½	12¾ 12¼	13½ 13	6 percent. Do.
Trunk.....	38	41	44	47	50	53	56	59	1½ inches.
Total length (ankle length suit) ¹	29	32	36	40	44	48	51	54	Do.
Width of leg: 7, 8, 9, 10 cut..... 11, 12, 14 cut.....	47¾ 45¾	47¾ 45¾	5¼ 5	5¼ 5	5½ 5¾	6 5¾	6¾ 6½	6¾ 6½	1 inch. Do.
Sleeve length: For military nonelastic shoulder..... For lap seam elastic shoulder..... For set-in shoulder ²	11 10	12 11	13 12	14 13	15 14	16½ 15½	18 17	19½ 18½	Do. Do.
Armhole length..... Leg cuff length (if cuff is used)..... Sleeve cuff length (if cuff is used).....	5 5 4	5½ 5 4	6 5 4	6 5 4	6½ 5 4	7 5 4	7 5 4	7½ 5 4	¾ inch. Maximum. Do.
Collarette length..... Quarter sleeve lengths..... Length knee-length suit.....	14 5 23	14 5 25	15 5 27	15 5 29	15 6 31	16 6 33	16 6 35	17 6 37	1 inch. 1½ inches. Do.

¹ Total length of knee length and shorter suits may vary according to style.² Sleeve lengths for set-in shoulder shall be the same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder with tolerance of 1 inch plus or minus.

TABLE 31.—Union Suits—Standard measurements for children's ribbed (1×1) worsted, worsted-merino, wool, and wool-cotton

[Made from fabric that has been washed in the roll and then cut and seamed]

(U. I. C-3)

Method of measuring, paragraphs 37-45

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment: 7, 8, 9, 10 cut..... 11, 12, 14 cut.....	9¾ 9¾	9¾ 9¾	10½ 10	10½ 10	11¼ 10¾	12 11½	12¾ 12¾	13½ 13	6 percent. Do.
Trunk.....	38	41	44	47	50	53	56	59	1½ inches.
Total length (ankle length suit) ¹	29	32	36	40	44	48	51	54	Do.
Width of leg: 7, 8, 9, 10 cut..... 11, 12, 14 cut.....	47½ 49½	47½ 49½	5¼ 5	5¼ 5	5½ 5½	6 5¾	6½ 6½	6¾ 6½	1 inch. Do.
Sleeve length: For military nonelastic shoulder..... For lap seam elastic shoulder..... For set-in shoulder ²	11 10	12 11	13 12	14 13	15 14	16½ 15½	18 17	19½ 18½	Do. Do.
Armhole length..... Leg cuff length (if cuff is used)..... Sleeve cuff length (if cuff is used).....	5 5 4	5½ 5 4	6 5 4	6 5 4	6½ 5 4	7 5 4	7 5 4	7½ 5 4	¾ inch. Maximum. Do.
Collarette length..... Quarter sleeve lengths..... Length knee-length suit.....	14 5 23	14 5 25	15 5 27	15 5 29	16 6 31	16 6 33	17 6 35	17 6 37	1 inch. 1½ inches. Do.

¹ Total length of knee length and shorter suits may vary according to style.² Sleeve lengths for set-in shoulder shall be the same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder with tolerance of 1 inch plus or minus.

UNION SUITS—CHILDREN'S TUCK STITCH, KNEE LENGTH

METHOD OF MEASURING

125. *Width of garment at waist line (1×1 rib portion).*—Measured across garment at narrowest part of body of garment. (From *H* to *J*, fig. 18.)

126. *Trunk.*—Twice the distance measured from point where shoulder joins neck opening to center of bottom line of crotch. Spread

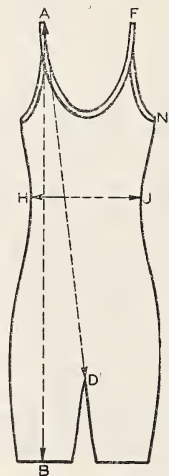


FIGURE 18.—Union suits—children's tuck stitch, knee length.

legs in measuring only sufficiently to adjust crotch. (Twice *A* to *D*, fig. 18.)

127. *Total length.*—Measured from point where shoulder joins neck opening to bottom edge of leg. (From *A* to *B*, fig. 18.)

128. *Armhole length.*—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm. (One-half length of armhole band.) (From *F* to *N*, fig. 18.)

129. *Neck opening.*—Measured from point where shoulder joins neck opening around inner edge of neck opening back to starting point or twice the distance across aperture of neck opening secured by grasping opposite sides of neck opening and bringing the two opposite edges parallel.

TABLE 32.—Union Suits—Standard measurements for children's tuck stitch—knee length

(U. I. C-4)

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2 — 4		6 — 8		10 — 12		14 — 16		
	Infants' ¹		Small ¹		Medium ¹		Large ¹		
Width of garment at waistline (1X1 rib portion) all cuts.....	7	7	7½	7½	8	8	8½	8½	10 percent.
Trunk (all styles).....	38	41	44	47	50	53	56	59	2 inches.
Total length ²	23	24½	26	27½	29½	31	33	34½	Do.
Armhole length.....	7	7	8	8	9	9	10	10	1 inch.
Neck opening.....	27	27	30	30	33	33	36	36	2 inches.

¹ Wherever the "small", "medium", and "large" designations are used to cover 2 or more numbered sizes the measurements should be the average of the standard measurements of the numbered sizes covered by the designation. Thus for the total length of children's tuck stitch union suits where the "medium" designation is used to cover sizes 28 and 30, the total length used as a standard for the "medium" designation should be the average of 29½ and 31 inches, or 30¼ inches. The same tolerances should apply as used for the numbered sizes. In this case, with a tolerance of plus or minus 2 inches allowed, the "medium" children's tuck stitch union suit may measure in total length from 28¼ to 32¼ inches.

² Total lengths may vary according to style.

VESTS—CHILDREN'S FLAT KNIT COTTON

BUILT-UP SHOULDER

METHOD OF MEASURING

130. *Width of garment*.—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 19.)

131. *Total length*.—Measured from point where shoulder joins colarette or neck opening, or from center of shoulder strap, if sleeveless garment, to bottom edge of vest. (From *A* to *B*, fig. 19.)

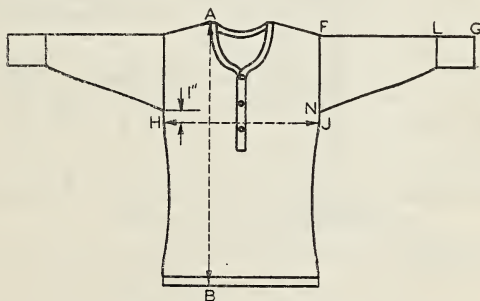


FIGURE 19.—Vests—children's flat knit cotton, built-up shoulder.

132. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve or of sleeve cuff if cuff is used. (From *F* to *G*, fig. 19.)

133. *Armhole length*.—For vests with sleeves, measured from point where sleeve is attached to shoulder to lowest point under arm. For sleeveless garment, measured from top point of shoulder at shoulder

along outer edge of armhole to lowest point under arm. (From *F* to *N*, fig. 19.)

134. *Sleeve cuff length (if cuff is used).*—Measured from middle of seam attaching cuff to sleeve to upper outside edge of cuff. (From *L* to *G*, fig. 19.)

135. *Neck opening.*—For button chest garment, measured from center of neck opening buttoned around inner edge of neck opening to outside end of buttonhole. If garment is pullover type, measured from point where shoulder joins neck opening around inner edge of neck opening back to starting point.

TABLE 33.—*Vests—Standard measurements for children's flat knit cotton—built-up shoulder, dutch neck, elbow sleeve*
(U. I. C-6)

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment (all gages)-----	10	11	12	13	14	15	16	17	6 percent.
Total length-----	17½	18½	20½	22½	24½	26	27½	29	1 inch.
Sleeve length-----	6	6	7	7	8	8	9	9	Do.
Armhole length-----	5	5½	6	6	6½	6½	7	7	¾ inch.
Sleeve cuff length (if cuff is used)-----	4	4	4	4	4	4	4	4	Maximum.
Neck opening-----	17	18	19	19	21	21	23	23	1 inch.

TABLE 34.—*Vests—Standard measurements for children's flat knit cotton—built-up shoulder, high neck, long sleeve*
(U. I. C-6)

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment (all gages)-----	10	11	12	13	14	15	16	17	6 percent.
Total length-----	17½	18½	20½	22½	24½	26	27½	29	1 inch.
Sleeve length-----	10	11	12	13	14	15½	17	18½	Do.
Armhole length-----	5	5½	6	6	6½	6½	7	7	¾ inch.
Sleeve cuff length (if cuff is used)-----	4	4	4	4	4	4	4	4	Maximum.
Neck opening-----	14	14	15	15	15	16	16	17	1 inch.

TABLE 35.—*Vests—Standard measurements for children's flat knit cotton—built-up shoulder, low neck, no sleeve*
(U. I. C-6)

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment (all gages)-----	10	11	12	13	14	15	16	17	6 percent.
Total length-----	17½	18½	20½	22½	24½	26	27½	29	1 inch.
Armhole length-----	6	6½	7	7	7½	7½	8	8	¾ inch.
Neck opening-----	27	28	29½	31	32½	34	35½	37	2 inches.

TABLE 36.—Vests—Standard measurements for children's flat knit cotton—built-up shoulder, low neck, short sleeve

(U. I. C-6)

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment (all gages).....	10.	11	12	13	14	15	16	17	6 percent.
Total length.....	17½	18½	20½	22½	24½	26	27½	29	1 inch.
Sleeve length.....	4½	4½	5	5	5½	5½	6	6	Do.
Armhole length.....	5½	6	6½	6½	7	7	7½	7½	¾ inch.
Sleeve cuff length (if cuff is used).....	4	4	4	4	4	4	4	4	Maximum.
Neck opening.....	27	28	29½	31	32½	34	35½	37	2 inches.

TABLE 37.—Vests—Standard measurements for children's ribbed (1×1) straight—lightweight, low neck, no sleeves, built-up shoulder

(U. I. C-7)

Method of measuring, paragraphs 76-79

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment (all cuts)-----	8 $\frac{3}{4}$	8 $\frac{3}{4}$	9 $\frac{1}{2}$	9 $\frac{1}{2}$	10 $\frac{1}{4}$	10 $\frac{1}{4}$	11	11	6 percent.
Total length-----	17 $\frac{1}{2}$	19	20 $\frac{1}{2}$	22	23 $\frac{1}{2}$	25	26 $\frac{1}{2}$	28 $\frac{1}{2}$	1 inch.
Armhole length-----	6 $\frac{1}{2}$	6 $\frac{1}{2}$	7	7 $\frac{1}{2}$	7 $\frac{1}{2}$	8	8 $\frac{1}{2}$	8 $\frac{1}{2}$	Do.
Neck opening-----	27	28	29	30	31 $\frac{1}{2}$	33	34 $\frac{1}{2}$	36	2 inches.

TABLE 38.—Vests—Standard measurements for children's ribbed (1×1) straight cotton—built-up shoulder, dutch neck, elbow sleeve, heavyweight

(U. I. C-5)

Method of measuring, paragraphs 130-135

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment:									
7, 8, 9, 10 cut	10	10	10 ³ / ₄	10 ³ / ₄	11 ³ / ₄	11 ³ / ₄	12 ³ / ₄	12 ³ / ₄	6 percent.
11, 12, 14 cut	9 ¹ / ₂	9 ¹ / ₂	10 ¹ / ₄	10 ¹ / ₄	11 ¹ / ₄	11 ¹ / ₄	12 ¹ / ₄	12 ¹ / ₄	Do.
Total length	17 ¹ / ₂	18 ¹ / ₂	20 ¹ / ₂	22 ¹ / ₂	24 ¹ / ₂	26	27 ¹ / ₂	29	1 inch.
Sleeve length	6	6	7	7	8	8	9	9	Do.
Armhole length	5	5 ¹ / ₂	6	6	6 ¹ / ₂	6 ¹ / ₂	7	7	³ / ₄ inch.
Sleeve cuff length (if cuff is used)	4	4	4	4	4	4	4	4	Maximum.
Neck opening	17	18	19	19	21	21	23	23	1 inch.

TABLE 39.—Vests—Standard measurements for children's ribbed (1×1) straight cotton—built-up shoulder, high neck, long sleeve, heavy weight

(U. I. C-5)

Method of measuring, paragraphs 130-135

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment: 7, 8, 9, 10 cut..... 11, 12, 14 cut..... Total length..... Sleeve length..... Armhole length..... Sleeve cuff length (if cuff is used)..... Neck opening.....	10 9½ 17½ 10 5 4 14	10 9½ 18½ 11 5½ 4 14	10¾ 10¼ 20½ 12 6 4 15	10¾ 10¼ 20½ 12 6 4 15	11¾ 11¼ 24½ 14 6½ 4 15	11¾ 11¼ 24½ 14 6½ 4 16	12¾ 12¼ 27½ 17 7 4 16	12¾ 12¼ 29 18½ 7 4 17	6 percent. Do. 1 inch. Do. ¾ inch. Maximum. 1 inch.

TABLE 40.—Vests—Standard measurements for children's ribbed (1×1) straight cotton—built-up shoulder, low neck, no sleeve, heavy weight

(U. I. C-5)

Method of measuring, paragraphs 130-135

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment: 7, 8, 9, 10 cut	10	10	10 $\frac{3}{4}$	10 $\frac{3}{4}$	11 $\frac{3}{4}$	11 $\frac{3}{4}$	12 $\frac{3}{4}$	12 $\frac{3}{4}$	6 percent.
11, 12, 14 cut	9 $\frac{1}{2}$	9 $\frac{1}{2}$	10 $\frac{1}{4}$	10 $\frac{1}{4}$	11 $\frac{1}{4}$	11 $\frac{1}{4}$	12 $\frac{1}{4}$	12 $\frac{1}{4}$	Do.
Total length	17 $\frac{1}{2}$	18 $\frac{1}{2}$	20 $\frac{1}{2}$	22 $\frac{1}{2}$	24 $\frac{1}{2}$	26	27 $\frac{1}{2}$	29	1 inch.
Armhole length	6	6 $\frac{1}{2}$	7	7	7 $\frac{1}{2}$	7 $\frac{1}{2}$	8	8	$\frac{3}{4}$ inch.
Neck opening	27	28	29 $\frac{1}{2}$	31	32 $\frac{1}{2}$	34	35 $\frac{1}{2}$	37	2 inches.

TABLE 41.—Vests—Standard measurements for children's ribbed (1×1) straight cotton—built-up shoulder, low neck, short sleeve, heavy weight

(U. I. C-5)

Method of measuring, paragraphs 130-135

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment: 7, 8, 9, 10 cut	10	10	10 $\frac{3}{4}$	10 $\frac{3}{4}$	11 $\frac{3}{4}$	11 $\frac{3}{4}$	12 $\frac{3}{4}$	12 $\frac{3}{4}$	6 percent.
11, 12, 14 cut	9 $\frac{1}{2}$	9 $\frac{1}{2}$	10 $\frac{1}{4}$	10 $\frac{1}{4}$	11 $\frac{1}{4}$	11 $\frac{1}{4}$	12 $\frac{1}{4}$	12 $\frac{1}{4}$	Do.
Total length	17 $\frac{1}{2}$	18 $\frac{1}{2}$	20 $\frac{1}{2}$	22 $\frac{1}{2}$	24 $\frac{1}{2}$	26	27 $\frac{1}{2}$	29	1 inch.
Sleeve length	4 $\frac{1}{2}$	4 $\frac{1}{2}$	5	5	5 $\frac{1}{2}$	5 $\frac{1}{2}$	6	6	Do.
Armhole length	5 $\frac{1}{2}$	6	6 $\frac{1}{2}$	6 $\frac{1}{2}$	7	7	7 $\frac{1}{2}$	7 $\frac{1}{2}$	$\frac{3}{4}$ inch.
Sleeve cuff length (if cuff is used)	4	4	4	4	4	4	4	4	Maximum.
Neck opening	27	28	29 $\frac{1}{2}$	31	32 $\frac{1}{2}$	34	35 $\frac{1}{2}$	37	2 inches.

TABLE 42.—Vests—Standard measurements for children's swiss rib straight—light weight, low neck, no sleeves, built-up shoulder

(U. I. C-8)

Method of measuring, paragraphs 76-79

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2	4	6	8	10	12	14	16	
Width of garment:									
12 cut.....	7	7	7½	7½	8	8	8½	8½	10 percent.
14 cut.....	6½	6½	7	7	7½	7½	8	8	Do.
Total length.....	18	20	22	24	26	28	30	32	1 inch.
Armhole length.....	7	7	8	8	9	9	10	10	Do.
Neck opening.....	24½	25	25½	26	27½	29	30½	32	2 inches.

VESTS—CHILDREN'S TUCK STITCH

LOW NECK, NO SLEEVES, BUILT-UP SHOULDER

METHOD OF MEASURING

136. *Width of garment at waist line (1×1 rib portion).*—Measured across garment at narrowest part of body of garment. (From *H* to *J*, fig. 20.)

137. *Total length.*—Measured from top edge of shoulder strap to bottom edge of vest. (From *A* to *B*, fig. 20.)

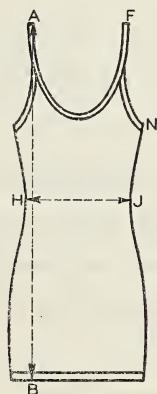


FIGURE 20.—Vests—children's tuck stitch, low neck, no sleeves, built-up shoulder.

138. *Armhole length.*—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm. (One-half length of armhole band.) (From *F* to *N*, fig. 20.)

139. *Neck opening.*—Measured from point where shoulder joins neck opening around inner edge of neck opening back to starting point or twice the distance across aperture of neck opening secured by grasping opposite sides of neck opening and bringing the two opposite edges parallel.

TABLE 43.—Vests—Standard measurements for children's tuck stitch—low neck, no sleeves, built-up shoulder

(U. I. C-9)

Location	Size (inches)								Tolerances (plus or minus)
	20	22	24	26	28	30	32	34	
	Age (approximate)								
	2 — 4		6 — 8		10 — 12		14 — 16		
	Infants'		Small		Medium		Large		
Width of garment at waistline (1X1 rib portion) all cuts.....	6½	6½	7	7	7½	7½	8	8	10 percent.
Total length.....	20	20	23	23	25	25	27	27	1 inch.
Armhole length.....	7	7	8	8	9	9	10	10	Do.
Neck opening.....	26	26	30	30	33	33	36	36	2 inches.

PART V. INFANTS' GARMENTS—STANDARD MEASUREMENTS AND METHODS IN DETAIL

TABLE 44.—Bands—Standard measurements for infants'

(U. I. I-1)

Method of measuring, paragraphs 6-11

Location	Size (numbers)						Tolerances (plus or minus)
	1	2	3	4	5	6	
Width of garment (all cuts).....	6	6½	7	7½	8	8½	6 percent.
Total length.....	9½	10½	11½	13	14½	16	½ inch.
Shoulder strap width.....	1½	1¾	1½	1¾	1½	1¾	¼ inch.
Shoulder strap length.....	2¾	3	3¼	3½	3¾	4	Do.
Armhole (circumference).....	8¾	9¼	10	10½	11	11¾	½ inch.
Neck opening (circumference).....	16½	17	18	19	20	21	Do.

BANDS, ABDOMINAL—INFANTS' RIBBED (1×1) KNIT

SINGLE OR DOUBLE THICKNESS

METHOD OF MEASURING

140. *Width of band.*—Measured across band at right angles to total length. (From *C* to *D*, fig. 21.)

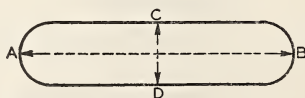


FIGURE 21.—Bands—abdominal.

141. *Total length.*—Measured lengthwise between extreme ends of band. (From *A* to *B*, fig. 21.)

TABLE 45.—Bands, Abdominal—Standard measurements for infants' ribbed (1×1)—(single or double thickness)

(U. I. I-3)

Location	Single thick- ness	Double thick- ness	Tolerances (plus or minus)
Width of band.....	5	5	½ inch.
Total length.....	22	22	1 inch.

TABLE 46.—Shirts—Standard measurements for infants'

(U. I. I-1)

Method of measuring, paragraphs 32-36

Location	Size (numbers)						Tolerances (plus or minus)
	1	2	3	4	5	6	
Width of garment (all cuts).....	6¼	6¾	7¼	7¾	8½	9¼	6 percent.
Total length.....	10½	11½	12½	14	15½	17	½ inch.
Sleeve length (long) straight.....	7½	8	8½	9¼	10	10¾	Do.
Set-in ¹							
Sleeve length (short) straight.....	2½	3	3½	3½	4	4	¼ inch.
Set-in ¹							
Armhole length.....	3¾	4¼	4½	4¾	5	5¼	½ inch.
Neck opening (circumference).....	9½	9½	10½	10½	11½	11½	Do.

¹ Same as straight sleeve, since measurement is taken from bottom of armhole.

PART VI. MEN'S GARMENTS—STANDARD MEASUREMENTS AND METHODS IN DETAIL

COATS, SPORT—MEN'S FLAT COTTON FLEECE LINED WINDBREAKER AND BUTTON FRONT TYPES

METHOD OF MEASURING

142. *Width of garment*.—Measured across buttoned or closed garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 13.)

143. *Total length*.—Measured from point where shoulder joins collar on windbreaker type or stolling on button-front type, to bottom edge of garment. (From *A* to *B*, fig. 13.)

144. *Sleeve length*.—Measured from lowest point under arm to lower outside edge of sleeve. (From *N* to *G*, fig. 13.)

145. *Armhole length*.—Measured from point where sleeve is attached to shoulder to lowest point under arm. (From *F* to *N*, fig. 13.)

146. *Collar length*.—(Windbreaker type only).—Measured from end of neck seam around neck seam to opposite end of neck seam.

147. *Border rib length*.—(Windbreaker type only).—Measured from middle of seam attaching rib to edge of garment to bottom edge of border rib. (From *C* to *D*, fig. 13.)

TABLE 47.—Coats, Sport—Standard measurements for men's flat cotton fleece lined—windbreaker and button front types

(U. I. M-22)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment:												
Both types.....	17	18	19	20	21	22	23	24	25	26	27	6 percent.
Total length:												
Windbreaker type.....	25	25	25	26	26	27	27	28	28	29	29	1 inch.
Button front type.....	26	26	26	27	27	28	28	29	29	30	30	Do.
Sleeve length:												
Both types.....	21	21	21	22	22	22	23	23	23	23	23	Do.
Armhole length:												
Both types.....	9	9	9	9½	9½	9½	9½	10	10	10	10	Do.
Collar length:												
Windbreaker type only.....	15½	15½	16	16	16½	16½	17	17	18	18½	19	Do
Border rib length:												
Windbreaker type only ¹	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Maximum.

¹ Given as a guide only, not as a standard.

TABLE 48.—Drawers—Standard measurements for men's cotton knee-length—flat knit regular

(U. I. M-19)

Method of measuring, paragraphs 12-20

Location	Size (inches)											Tolerances (plus or minus)
	30	32	34	36	38	40	42	44	46	48	50	
Total length.....	22	22½	23	23½	24	24½	25	25½	26	26½	27	1 inch.
Waist.....	30	32	34	36	38	40	42	44	46	48	50	Do.
Front rise.....	13¾	14	14½	14½	14¾	15	15¼	15½	16	16½	17	¾ inch.
Back rise.....	15½	15¾	16	16¼	16½	16¾	17	17¼	17¾	18¼	18¾	Do.
Width across seat.....	15½	16½	17½	18½	19½	20½	21½	22½	23½	24½	25½	1 inch.
Width of thigh.....	7¾	8¼	8¾	9¼	9¾	10¼	10¾	11¼	11¾	12¼	12¾	½ inch.
Length front opening.....	10	10¼	10½	10¾	11	11¼	11½	11¾	12	12¼	12½	Do.

TABLE 49.—Drawers—Standard measurements for men's cotton knee-length—ribbed (1×1)

(U. I. M-19)

Method of measuring, paragraphs 12-20

Location	Size (inches)											Tolerances (plus or minus)
	30	32	34	36	38	40	42	44	46	48	50	
Total length.....	23	23½	24	24½	25	25½	26	26½	27	27½	28	1 inch.
Waist.....	30	32	34	36	38	40	42	44	46	48	50	Do.
Front rise.....	13¾	14	14½	14½	14¾	15	15¼	15½	16	16½	17	¾ inch.
Back rise.....	15½	15¾	16	16¼	16½	16¾	17	17¼	17¾	18¼	18¾	Do.
Width across seat.....	14	14½	15½	16½	17½	18½	19¼	20	20½	21	21½	1 inch.
Width of thigh.....	7	7¼	7¾	8¼	8¾	9¼	9¾	10	10¼	10¾	10¾	½ inch.
Length front opening.....	10	10¼	10½	10¾	11	11¼	11½	11¾	12	12¼	12½	Do

TABLE 50.—Drawers—Standard measurements for men's flat knit cotton, and men's flat knit worsted, worsted-merino, wool, and wool-cotton

[Either made from fabric that has been washed in the roll and then cut and seamed or for garments that are washed and fulled after seaming]

(U. I. M-18)

Method of measuring, paragraphs 12-20

Location	Size (inches)											Tolerances (plus or minus)
	30	32	34	36	38	40	42	44	46	48	50	
Total length.....	39	39¾	40½	41¼	42	42¾	43½	44	44½	45	45½	1 inch.
Waist.....	30	32	34	36	38	40	42	44	46	48	50	Do.
Front rise.....	13¾	14	14¼	14½	14¾	15	15¼	15½	16	16½	17	¾ inch.
Back rise.....	15½	15¾	16	16¼	16½	16¾	17	17¼	17½	18¼	18¾	Do.
Width across seat.....	15½	16½	17½	18½	19½	20½	21½	22½	23½	24½	25½	1 inch.
Width of thigh.....	8½	9	9½	10	10½	11	11½	12	12½	13	13½	6 percent.
Width of calf.....	6½	6¾	6¾	6¾	7	7¼	7½	7¾	8	8½	8½	Do.
Length front opening.....	10	10¾	10½	10¾	11	11¼	11½	11¾	12	12¼	12½	½ inch.
Drawer cuff length.....	6	6	6	6	6	6	6	6	6	6	6	Maximum.

TABLE 51.—Drawers—Standard measurements for men's ribbed (1×1) cotton and men's ribbed (1×1) worsted, worsted-merino, wool, and wool-cotton

[Made from fabric that has been washed in the roll and then cut and seamed]

(U. I. M-17)

Method of measuring, paragraphs 12-20

Location	Size (inches)											Tolerances (plus or minus)
	30	32	34	36	38	40	42	44	46	48	50	
Total length.....	39	39¾	40½	41¼	42	42¾	43½	44	44½	45	45½	1 inch.
Waist.....	30	32	34	36	38	40	42	44	46	48	50	Do.
Front rise.....	13¾	14	14¼	14½	14¾	15	15¼	15½	16	16½	17	¾ inch.
Back rise.....	15½	15¾	16	16¼	16½	16¾	17	17¼	17½	18¼	18¾	Do.
Width across seat.....	14	14½	15½	16½	17½	18½	19½	20	20½	21	21½	1 inch.
Width of thigh.....	7¾	8	8½	9	9½	10	10¾	10¾	11	11¼	11½	6 percent.
Width of calf.....	5	5¼	5¾	5¾	5¾	5¾	6	6¾	6¾	6¾	6¾	Do.
Length front opening.....	10	10¾	10½	10¾	11	11¼	11½	11¾	12	12¼	12½	½ inch.
Drawer cuff length.....	6	6	6	6	6	6	6	6	6	6	6	Maximum.

TABLE 52.—Shirts—Standard measurements for men's flat knit cotton

(U. I. M-12)

Method of measuring, paragraphs 21-27

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment ¹ (all gages).....	17	18	19	20	21	22	23	24	25	26	27	6 percent.
Total length.....	29	29	31	31	33	33	33	34	34	35	35	1 inch.
Sleeve length.....	21	21	21	22	22	22	22	23	23	23	23	Do.
Armhole length.....	8	8	8	9	9	9	9	10	10	10	10	Do.
Sleeve cuff length.....	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Maximum.
Neck opening:												
Button front.....	16	16	17	17	17	18	18	18	19	19	19	1 inch.
Pullover neck.....	19	19	20	20	20	21	21	21	22	22	22	Do.
Quarter sleeve length.....	7	7	7	7	7	7	7	7	7	7	7	1½ inches.

¹ On sizes 52 and 54, wherever widths specified cannot be produced on a single machine, fabric is to be taken from 2 smaller machines and seamed together to produce the specified widths.

TABLE 53.—*Shirts—Standard measurements for men's ribbed (1×1) cotton*

(U. I. M-11)

Method of measuring, paragraphs 21-27

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment: ¹												
8, 9, 10 cut.....	13½	14¼	15	15¾	16½	17¼	18	18¾	19½	20¼	21	6 percent.
11, 12, 14 cut.....	13	13¾	14½	15¼	16½	17¼	18	18½	19½	19	19½	Do.
Total length.....	31	31	32	33	34	34	34	35	35	36	36	1 inch.
Sleeve length:												
For military nonelastic shoulder.....	22	22	22	23	23	23	23	24	24	24	24	Do.
For lap seam elastic shoulder.....	21	21	21	22	22	22	22	23	23	23	23	Do.
For set-in shoulder ²												
Armhole length.....	8	8	8	9	9	9	9	10	10	10	10	Do.
Sleeve cuff length.....	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Maximum.
Collarett length:												
(Military high neck).....	18	18	19	19	19	20	20	20	21	21	21	1 inch.
Quarter sleeve length.....	7	7	7	7	7	7	7	7	7	7	7	1½ inches.

¹ On sizes 52 and 54, wherever widths specified cannot be produced on a single machine, fabric is to be taken from 2 smaller machines and seamed together to produce the specified widths.

² Sleeve lengths for set-in shoulder shall be the same as those for military nonelastic shoulder, plus the amount or distance cut out of shoulder with tolerance of 1 inch plus or minus.

TABLE 54.—*Shirts—Standard measurements for men's flat knit wool and wool-cotton*
[For garments that are washed and fullled after seaming]

(U. I. M-13)

Method of measuring, paragraphs 21-27

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment ¹ (all gages).....	17	18	19	20	21	22	23	24	25	26	27	6 percent.
Total length.....	32	32	33	33	33	34	34	35	35	36	36	1 inch.
Sleeve length.....	20	20	20	21	21	21	21	22	22	22	22	Do.
Armhole length.....	9	9	9	10	10	10	10	11	11	11	11	Do.
Sleeve cuff length.....	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Maximum.
Border rib length.....	4	4	4	4	4	4	4	4	4	4	4	Do.
Collarett length:												
Button front.....	18	18	19	19	19	20	20	20	21	21	21	1 inch.
Pullover neck.....	19	19	20	20	20	21	21	21	22	22	22	Do.

¹ On sizes 52 and 54, wherever widths specified cannot be produced on a single machine, fabric is to be taken from 2 smaller machines and seamed together to produce the specified widths.

TABLE 55.—*Shirts, Athletic—Standard measurements for men's knit pullover shirt—*
ribbed (1×1) and flat knit

(U. I. M-14)

Method of measuring, paragraphs 28-31

Location	Size (inches)											Tolerances (plus or minus)
	34 — 36		38 — 40		42 — 44		46 — 48		50	52	54	
	Small ¹		Medium ¹		Large ¹		Ex. large ¹					
For ribbed shirts only												
Width of garment:												
Rib knit (1×1)-----	11¾	12½	13¼	14	14¾	15½	16¼	17	17½	18	18½	6 percent.
Flat knit-----	15	16	17	18	19	20	21	22	23	24	25	Do.
Total length:												
Rib knit-----	31	31	32	33	34	34	34	35	35	36	36	1 inch.
Flat knit-----	29	29	31	31	33	33	33	34	34	35	35	Do.
Armhole length-----	12	12	13	13	14	14	15	15	16	16	16	2 inches.
Collarette length ² -----	26	26	27	27	28	28	29	29	30	30	30	Do.

¹ Wherever the "small," "medium," and "large" designations are used to cover 2 or more numbered sizes, the measurements used should be the average of the standard measurements of the numbered sizes covered by the designation. Thus for the total length of men's ribbed athletic shirts where the "medium" designation is used to cover sizes 38 and 40, the total length used as a standard for the "medium" designation should be the average of 32 and 33 inches, or 32½ inches. The same tolerances should apply as used for the numbered sizes. In this case, with a tolerance of plus or minus 1 inch allowed, the "medium" shirt may measure in total length from 31½ to 33½ inches.

² Collarett lengths may vary according to style.

TABLE 56.—*Shirts, Athletic—Standard measurements for men's panel ribbed (needle out) knit pullover*

[From fabric made on latch needle machines with other than swiss cams]

(U. I. M-15)

Method of measuring, paragraphs 28-31

Location	Size (inches)											Tolerances (plus or minus)
	34 — 36		38 — 40		42 — 44		46 — 48		50	52	54	
	Small ¹		Medium ¹		Large ¹		Ex. large ¹					
Width of garment (panel rib) -----	10¾	11½	12¼	13	13¾	14½	15¼	16	16½	17	17½	6 percent. 1 inch. 2 inches. Do.
Total length -----	31	31	32	33	34	34	34	35	35	36	36	
Armhole length -----	12	12	13	13	14	14	14	15	15	16	16	
Collarette length ² -----	26	26	27	27	28	28	29	29	30	30	30	

¹ Wherever the "small," "medium," and "large" designations are used to cover 2 or more numbered sizes, the measurements used should be the average of the standard measurements of the numbered sizes covered by the designation. Thus for the total length of men's panel-ribbed athletic shirts where the "medium" designation is used to cover sizes 38 and 40, the total length used as a standard for the "medium" designation should be the average of 32 and 33 inches, or 32½ inches. The same tolerances should apply as used for the numbered sizes. In this case, with a tolerance of plus or minus 1 inch allowed, the "medium" shirt may measure in total length from 31½ to 33½ inches.

² Collarette lengths may vary according to style.

TABLE 57.—*Shirts, Athletic—Standard measurements for men's swiss ribbed pullover*

(U. I. M-16)

Method of measuring, paragraphs 28-31

Location	Size (inches)												Tolerances (plus or minus)
	34 — 36		38 — 40		42 — 44		46 — 48		50	52	54		
	Small		Medium		Large		Ex. large ¹						
Width of garment: Swiss rib: 12 cut..... 14 cut..... Total length..... Armhole length..... Collarette length ¹	9	9	10	10	11	11	12	12	12	13	13	10 percent. Do. 1 inch. 2 inches. Do.	
	8	8	9	9	10	10	11	11	11	12	12		
	32	32	33½	33½	35	35	36	36	36	36	36		
	12	12	13	13	14	14	15	15	16	16	16		
	26	26	27	27	28	28	29	29	30	30	30		

¹ Collarette lengths may vary according to style.

SHIRTS, POLO—MEN'S KNITTED

METHOD OF MEASURING

148. *Width of garment.*—Measured across buttoned garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 14.)

149. *Total length.*—Measured from point where shoulder joins collar to bottom edge of shirt. (From *A* to *B*, fig. 14.)

150. *Sleeve length.*—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve cuff. (From *F* to *G*, fig. 14.)

151. *Armhole length.*—Measured from point where sleeve is attached to shoulder to lowest point under arm. (From *F* to *N*, fig. 14.)

152. *Collar length.*—Measured from center of collar button around neck band to outside end of buttonhole.

TABLE 58.—*Shirts, Polo—Standard measurements for men's flat knit all-wool*

(U. I. M-23)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment.....	16	17	18	19	20	21	22	23	24	25	26	6 percent.
Total length.....	28	28	29	29	30	30	31	31	32	33	33	1 inch.
Sleeve length.....	22	22	22	23	23	23	23	24	24	24	24	Do.
Short sleeve.....	11	11	11	12	12	12	12	13	13	13	13	Do.
Armhole length.....	9	9	9½	9½	10	10	10½	10½	11	11	11½	Do.
Collar length.....	14	14½	15	15½	16	16½	17	17½	18	18½	19	Do.

TABLE 59.—*Shirts, Polo—Standard measurements for men's flat knit cotton and worsted-cotton*

(U. I. M-23)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment.....	16	17	18	19	20	21	22	23	24	25	26	6 percent.
Total length.....	26	26	27	28	28	29	30	30	31	32	32	1 inch.
Sleeve length.....	22	22	22	23	23	23	23	24	24	24	24	Do.
Short sleeve.....	11	11	11	12	12	12	12	13	13	13	13	Do.
Armhole length.....	9	9	9½	9½	10	10	10½	10½	11	11	11½	Do.
Collar length.....	14	14½	15	15½	16	16½	17	17½	18	18½	19	Do.

TABLE 60.—*Shirts, Polo—Standard measurements for men's flat knit wool-cotton*

(U. I. M-23)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment.....	16	17	18	19	20	21	22	23	24	25	26	6 percent.
Total length.....	27	27	28	28	29	29	30	30	31	32	32	1 inch.
Sleeve length.....	22	22	22	23	23	23	23	24	24	24	24	Do.
Short sleeve.....	11	11	11	12	12	12	12	13	13	13	13	Do.
Armhole length.....	9	9	9½	9½	10	10	10½	10½	11	11	11½	Do.
Collar length.....	14	14½	15	15½	16	16½	17	17½	18	18½	19	Do.

TABLE 61.—*Shirts, Polo—Standard measurements for men's ribbed (1×1) cotton*

(U. I. M-23)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment: 12, 14 cut.....	13	13¾	14½	15¼	16	16¾	17½	18¼	18¾	19¼	19¾	6 percent.
Total length.....	26	26	27	28	28	29	30	30	31	32	32	1 inch.
Sleeve length.....	22	22	22	23	23	23	23	24	24	24	24	Do.
Short sleeve.....	11	11	11	12	12	12	12	13	13	13	13	Do.
Armhole length.....	9	9	9½	9½	10	10	10½	10½	11	11	11½	Do.
Collar length.....	14	14½	15	15½	16	16½	17	17½	18	18½	19	Do.

SHIRTS, SWEAT—MEN'S FLAT FLEECE LINED

METHOD OF MEASURING

153. *Width of garment*.—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 15.)

154. *Total length*.—Measured from point where shoulder joins collarette or neck opening to bottom edge of shirt. (From *A* to *B*, fig. 15.)

155. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve cuff. (From *F* to *G*, fig. 15.)

156. *Armhole length*.—Measured from point where sleeve is attached to shoulder to lowest point under arm. (From *F* to *N*, fig. 15.)

157. *Sleeve cuff length*.—Measured from middle of seam attaching cuff to sleeve to upper outside edge of cuff. (From *L* to *G*, fig. 15.)

158. *Neck opening*.—Measured from point where shoulder joins collarette or neck opening around inner edge of collarette or neck opening back to starting point or twice the distance across aperture of collarette, or neck opening, secured by grasping opposite sides of collarette or neck opening and bringing the two opposite edges parallel. (From *X* to *Y*, fig. 7, *A*).

159. *Border rib length*.—Measured from middle of seam attaching rib to edge of shirt to bottom edge of border rib. (From *C* to *D*, fig. 15.)

TABLE 62.—Shirts, Sweat—Standard measurements for men's flat fleece-lined

(U. I. M-21)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment.....	17	18	19	20	21	22	23	24	25	26	27	6 percent.
Total length.....	26	26	27	27	28	28	29	29	29	29	29	1 inch.
Sleeve length.....	21	21	22	22	23	23	23½	23½	23½	23½	23½	Do.
Armhole length.....	9	9	9	10	10	10	11	11	11	11	11	Do.
Sleeve cuff length.....	5	5	5	5	5	5	5	5	5	5	5	Maximum.
Neck opening.....	20	21	21	21	22	22	22	23	23	23	23	1 inch.
Border rib length.....	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Maximum.

SHORTS, ATHLETIC—MEN'S FLAT KNIT

METHOD OF MEASURING

160. *Total length*.—Measured from top outside edge of waistband to bottom edge of leg. (From *A* to *B*, fig. 22.)

161. *Waist*.—Twice the distance measured between the outside edges of waist band when garment is buttoned. (Twice *A* to *C*, fig. 22.)

162. *Width across seat*.—Measured across back of garment at a point halfway between bottom of crotch and top edge of waist band. (From *K* to *L*, fig. 22.)

163. *Width across bottom of leg*.—Measured across leg along lower edge. (From *B* to *E*, fig. 22.)

164. *Front rise*.—Measured from bottom of crotch up front of buttoned garment to middle point of front edge of waist band. (From *D* to *G*, fig. 22.)

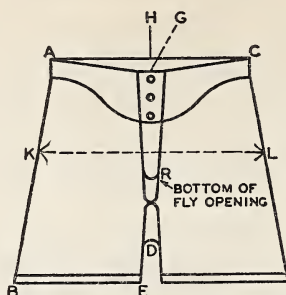


FIGURE 22.—Shorts, athletic—men's flat knit.

165. *Back rise*.—Measured from bottom of crotch up back of garment to middle point of back edge of waist band. (From *D* to *H*, fig. 22.)

166. *Front opening*.—Measured from bottom point of opening to top edge of waist band, garment buttoned. (From *R* to *G*, fig. 22.)

TABLE 63.—Shorts, Athletic—Standard measurements for men's flat knit

(U. I. M-20)

Location	Size (inches)											Tolerances (plus or minus)
	30	32	34	36	38	40	42	44	46	48	50	
Total length.....	17	17½	18	18½	19	19½	20	20	21	22	22	1 inch.
Waist.....	30	32	34	36	38	40	42	44	46	48	50	Do.
Width across seat.....	16	17	18	19	20	21	22	23	23½	24	24½	Do.
Width across bottom of leg.....	10½	11	11½	12	12½	12½	13	13	13½	13½	14	¾ inch.
Front rise.....	12½	13	13½	13½	14	14½	14½	15	15	15½	15½	Do.
Back rise.....	13½	14	14½	14½	15	15½	15½	16	16	16½	16½	Do.
Length front opening.....	9	9	9½	10	10½	11	11½	12	12	12½	12½	½ inch.

TABLE 64.—Union Suits—Standard measurements for men's flat fleece

(U. I. M-4)

Method of measuring, paragraphs 37-45

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment (all gages).....	17	18	19	20	21	22	23	24	25	26	27	6 percent.
Trunk.....	58	60	62	64	66	68	70	72	74	76	78	2 inches.
Total length (ankle).....	55	56	57	58	59	60	61	62	63	64	65	2½ inches.
Width of leg (all gages).....	8½	9	9½	10	10½	11	11½	12	12½	13	13½	1 inch.
Sleeve length.....	20	20	20½	21	21	21	22	22	22	22	22	Do.
Armhole length.....	9	9	9	10	10	10	10	11	11	11	11	Do.
Leg cuff length.....	6	6	6	6	6	6	6	6	6	6	6	Maximum.
Sleeve cuff length.....	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Do.
Collarette length.....	18	18	19	19	19	20	20	20	21	21	21	1 inch.

TABLE 65.—*Union Suits—Standard measurements for men's flat knit cotton (bleached fabric from carded yarns)*

(U. I. M-2)

Method of measuring, paragraphs 37-45

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment ¹ (all gages).....	17	18	19	20	21	22	23	24	25	26	27	6 percent.
Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
Total length (ankle length suit).....	56	57	58	59	60½	62	63	64	65	66	67	2½ inches.
Width of leg (all gages).....	8½	9	9½	10	10½	11	11½	12	12½	13	13½	1 inch.
Sleeve length:												
For military nonelastic shoulder.....	22	22	22	23	23	23	23	24	24	24	24	Do.
For lap seam elastic should- er.....	21	21	21	22	22	22	22	23	23	23	23	Do.
For set-in shoulder ²	8	8	8	9	9	9	9	10	10	10	10	Do.
Armhole length.....	6	6	6	6	6	6	6	6	6	6	6	Maximum.
Leg cuff length.....	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Do.
Collarett length:												
Military high neck.....	18	18	19	19	19	20	20	20	21	21	21	1 inch.
Quarter sleeve length.....	7	7	7	7	7	7	7	7	7	7	7	1½ inches.
Length knee-length suit ³	40	41	42	43	44½	46	47	48	49	50	51	2½ inches.
Length ¾-length suit.....	53	54	55	56	57	58	59	60	61	62	63	Do.
Men's "stouts":												
(a) Total length.....	53	54	55	56	57	58	59	60	61	62	63	Do.
(b) Sleeve length:												
For military non- elastic shoulder.....	19½	19½	19½	20½	20½	20½	20½	21½	21½	21½	21½	1 inch.
For lap-seam elastic shoulder.....	18½	18½	18½	19½	19½	19½	19½	20½	20½	20½	20½	Do.
(c) Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
(d) Width (all gages).....	18	19	20	21	22	23	24	25	26	27	28	6 percent.

¹ On sizes 52 and 54, wherever widths specified cannot be produced on a single machine, fabric is to be taken from 2 smaller machines and seamed together to produce the specified widths.² Sleeve lengths for set-in shoulder shall be the same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder, with tolerances of 1 inch plus or minus.³ Total length of knee length and shorter suits may vary according to style.TABLE 66.—*Union Suits—Standard measurements for men's ribbed (1×1) cotton (bleached fabric from carded yarns)*

(U. I. M-1)

Method of measuring, paragraphs 37-45

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment: ¹												
7, 8, 9, 10 cut.....	13½	14¼	15	15¾	16½	17¼	18	18¾	19½	20¼	21	6 percent.
11, 12, 14 cut.....	13	13¾	14½	15¼	15¾	16½	17¼	18	18½	19	19½	Do.
Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
Total length (ankle-length suit).....	56	57	58	59	60½	62	63	64	65	66	67	2½ inches.
Width of leg:												
7, 8, 9, 10 cut.....	6¾	7½	7½	7¾	8¼	8½	9	9¾	9¾	10½	10½	1 inch.
11, 12, 14 cut.....	6½	6¾	7¼	7¾	7¾	8¼	8½	9	9¾	9½	9¾	Do.
Sleeve length:												
For military nonelastic shoulder.....	22	22	22	23	23	23	23	24	24	24	24	Do.
For lap seam elastic shoulder.....	21	21	21	22	22	22	22	23	23	23	23	Do.
For set-in shoulder ²	8	8	8	9	9	9	9	10	10	10	10	Do.
Armhole length.....	6	6	6	6	6	6	6	6	6	6	6	Maximum.
Leg cuff length.....	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Do.
Collarett length (military high neck).....	18	18	19	19	19	20	20	20	21	21	21	1 inch.
Quarter sleeve length.....	7	7	7	7	7	7	7	7	7	7	7	1½ inches.

¹ On sizes 52 and 54, wherever widths specified cannot be produced on a single machine, fabric is to be taken from 2 smaller machines and seamed together to produce the specified widths.² Sleeve lengths for set-in shoulder shall be the same as those for military nonelastic shoulder, plus the amount or distance cut out of shoulder with tolerances of 1 inch plus or minus.

TABLE 66.—Union Suits—Standard measurements for men's ribbed (1×1) cotton (bleached fabric from carded yarns)—Continued

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Length knee-length suit ³	40	41	42	43	44½	46	47	48	49	50	51	2½ inches.
Length ¾ length suit.....	53	54	55	56	57	58	59	60	61	62	63	Do.
Men's "stouts":.....												
(a) Total length.....	53	54	55	56	57	58	59	60	61	62	63	Do.
(b) Sleeve length:												
For military non-elastic shoulder.....	19½	19½	19½	20½	20½	20½	20½	21½	21½	21½	21½	1 inch.
For lap-seam elastic shoulder.....	18½	18½	18½	19½	19½	19½	19½	20½	20½	20½	20½	Do.
(c) Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
(d) Width:												
7, 8, 9, 10 cut.....	14¼	15	15¾	16½	17¼	18	18¾	19½	20¼	21	21¾	6 percent.
11, 12, 14 cut.....	13¾	14½	15¼	15¾	16½	17¼	18	18½	19	19½	20	Do.

³ Total length of knee-length and shorter suits may vary according to style.

UNION SUITS—MEN'S RIBBED (1×1) COTTON

NO SLEEVES, THREE-QUARTER LENGTH, BUTTON FRONT, AND LOW NECK, NO SLEEVES, THREE-QUARTER LENGTH, BUTTON SHOULDER

METHOD OF MEASURING

167. *Width of garment*.—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 8.)

168. *Trunk*.—Twice the distance measured from point where shoulder joins collarette to center of bottom line of gusset at crotch. Spread legs in measuring only sufficiently to adjust crotch gusset. (Twice *C* to *D*, fig. 8.)

169. *Total length*.—Measured from center of shoulder strap to bottom edge of leg. (From *A* to *B*, fig. 8.)

170. *Width of leg*.—Measured across leg of suit 6 inches below point *D*, figure 1, and must equal one-half width of garment within tolerance of one inch plus or minus. (From *O* to *P*, fig. 7.)

171. *Armhole length*.—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm. (From *F* to *N*, fig. 8.)

172. *Leg cuff length*.—Measured from middle of seam attaching cuff to leg to outside bottom edge of cuff. (From *K* to *B*, fig. 7.)

173. *Collarlette length*.—Measured from point where shoulder joins collarette around inner edge of collarette back to starting point.

TABLE 67.—Union Suits—Standard measurements for men's ribbed (1×1) cotton—low neck, no sleeves, three-quarter length, button shoulder

(U. I. M-6)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment (all cuts) ..	12¼	13	13¾	14½	15	15¾	16½	17¼	17¾	18¼	18¾	6 percent.
Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
Total length (¾ length).....	53	54	55	56	57	58	59	60	61	62	63	Do.
Width of leg (all cuts).....	6½	6½	6½	7¼	7½	7½	8¼	8½	8½	9½	9½	1 inch.
Armhole length.....	12	12	13	13	14	14	15	15	16	16	16	2 inches.
Leg cuff length.....	6	6	6	6	6	6	6	6	6	6	6	Maximum.
Collarlette length: ¹												
Button shoulder.....	26	26	27	27	28	28	29	29	30	30	30	2 inches.

¹ Collarlette lengths may vary according to style.

TABLE 68.—*Union Suits—Standard measurements for men's ribbed (1×1) cotton—no sleeves, three-quarter length, button front*

(U. I. M-5)

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment:												
7, 8, 9, 10 cut.....	13½	14¼	15	15¾	16½	17¼	18	18¾	19½	20¼	21	6 percent.
11, 12, 14 cut.....	13	13¾	14½	15¼	16½	17¼	18	18½	19	19½	20	Do.
Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
Total length (¾ length).....	53	54	55	56	57	58	59	60	61	62	63	Do.
Width of leg:												
7, 8, 9, 10 cut.....	6¾	7¼	7½	7¾	8¼	8½	9	9¾	9¾	10¼	10½	1 inch.
11, 12, 14 cut.....	6½	6¾	7¼	7½	7¾	8¼	8½	9	9¼	9½	9¾	Do.
Armhole length.....	12	12	13	13	14	14	15	15	16	16	16	2 inches.
Leg cuff length.....	6	6	6	6	6	6	6	6	6	6	6	Maximum.
Collarett length.....												
Button front.....	20	20	21	21	21	22	22	22	23	23	23	2 inches.

TABLE 69.—*Union Suits—Standard measurements for men's ribbed (1×1) worsted, worsted-merino, wool, and wool-cotton*

[Made from fabric that has been washed in the roll and then cut and seamed]

(U. I. M-3)

Method of measuring, paragraphs 37-45

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment: ¹												
7, 8, 9, 10 cut.....	13½	14¼	15	15¾	16½	17¼	18	18¾	19½	20¼	21	6 percent.
11, 12, 14 cut.....	13	13¾	14½	15¼	16½	17¼	18	18½	19	19½	20	Do.
Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
Total length (ankle length suit).....	56	57	58	59	60½	62	63	64	65	66	67	2½ inches.
Width of leg:												
7, 8, 9, 10 cut.....	6¾	7¼	7½	7¾	8¼	8½	9	9¾	9¾	10¼	10½	1 inch.
11, 12, 14 cut.....	6½	6¾	7¼	7½	7¾	8¼	8½	9	9¼	9½	9¾	Do.
Sleeve length:												
For military nonelastic shoulder.....	22	22	22	23	23	23	23	24	24	24	24	Do.
For lap seam elastic shoulder.....	21	21	21	22	22	22	22	23	23	23	23	Do.
For set-in shoulder ²	8	8	8	9	9	9	9	10	10	10	10	Do.
Armhole length.....	6	6	6	6	6	6	6	6	6	6	6	Maximum.
Leg cuff length.....	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	Do.
Collarett length (military high neck).....	18	18	19	19	19	20	20	20	21	21	21	1 inch.
Quarter sleeve length.....	7	7	7	7	7	7	7	7	7	7	7	1½ inches.
Length knee-length suit ³	40	41	42	43	44½	46	47	48	49	50	51	2½ inches.
Length: ¾ length suit.....	53	54	55	56	57	58	59	60	61	62	63	Do.
Men's "stouts":												
(a) Total length.....	53	54	55	56	57	58	59	60	61	62	63	Do.
(b) Sleeve length:												
For military nonelastic shoulder.....	19½	19½	19½	20½	20½	20½	20½	21½	21½	21½	21½	1 inch.
For lap seam elastic shoulder.....	18½	18½	18½	19½	19½	19½	19½	20½	20½	20½	20½	Do.
(c) Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
(d) Width:												
7, 8, 9, 10 cut.....	14¼	15	15¾	16½	17¼	18	18¾	19½	20¼	21	21¾	6 percent.
11, 12, 14 cut.....	13¾	14½	15¼	16½	17¼	18	18½	19	19½	20	20	Do.

¹ On sizes 52 and 54, wherever width specified cannot be produced on a single machine, fabric is to be taken from 2 smaller machines and seamed together to produce the specified widths.² Sleeve lengths for set-in shoulder shall be the same as those for military nonelastic shoulder plus the amount or distance cut out of shoulder, with tolerance of 1 inch plus or minus.³ Total length of knee length and shorter suits may vary according to style.

TABLE 70.—*Union Suits, Athletic—Standard measurements for men's cotton flat knit—no sleeves, button shoulder, short leg*

(U. I. M-8)

Method of measuring, paragraphs 46-51

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment.....	15	16	17	18	19	20	21	22	23	24	25	6 percent.
Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
Total length ¹	38	39	40	41	42	43	44	45	46	47	48	2½ inches.
Width of leg bottom.....	9	9½	10	10½	11	11½	12	12½	13	13½	14	6 percent.
Armhole length.....	12	12	13	13	14	14	15	15	16	16	16	2 inches.
Collarette length ²	26	26	27	27	28	28	29	29	30	30	30	Do.

¹ Total length of athletic suits may vary according to style.² Collarette lengths may vary according to style.TABLE 71.—*Union Suits, Athletic—Standard measurements for men's cotton ribbed (1×1) knit—no sleeves, button shoulder, short leg*

(U. I. M-7)

Method of measuring, paragraphs 46-51

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment.....	12¼	13	13¾	14½	15	15¾	16½	17¼	17¾	18¼	18¾	6 percent.
Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
Total length ¹	38	39	40	41	42	43	44	45	46	47	48	2½ inches.
Width of leg bottom.....	6½	7	7½	8	8½	9	9½	10	10½	11	11½	6 percent.
Armhole length.....	12	12	13	13	14	14	15	15	16	16	16	2 inches.
Collarette length ²	26	26	27	27	28	28	29	29	30	30	30	Do.

¹ Total length of athletic suits may vary according to style.² Collarette lengths may vary according to style.TABLE 72.—*Union Suits, Athletic—Standard measurements for men's panel ribbed (needle out) knit—no sleeve, button shoulder, short leg*

[Made from fabric on machines with other than swiss cams]

(U. I. M-9)

Method of measuring, paragraphs 46-51

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment.....	11¼	12	12¾	13½	14	14¾	15½	16¼	16¾	17¼	17¾	6 percent.
Trunk.....	60	62	64	66	68	70	72	74	76	78	80	2 inches.
Total length ¹	38	39	40	41	42	43	44	45	46	47	48	2½ inches.
Width across bottom of leg.....	6	6½	7	7½	8	8½	9	9½	10	10½	11	6 percent.
Armhole length.....	12	12	13	13	14	14	15	15	16	16	16	2 inches.
Collarette length ²	26	26	27	27	28	28	29	29	30	30	30	Do.

¹ Total length of athletic suits may vary according to style.² Collarette lengths may vary according to style.

TABLE 73.—*Union Suits, Athletic—Standard measurements for men's swiss ribbed knit—no sleeve, button shoulder, short leg*

[Measurements herein given do not apply to fabrics made on flat bed machines]

(U. I. M-10)

Method of measuring, paragraphs 46-51

Location	Size (inches)											Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	52	54	
Width of garment: 11 and 12 cut.....	10	10	11	11	12	12	13	13	13	14	14	10 percent.
14 cut.....	9	9	10	10	11	11	12	12	12	13	13	Do.
Trunk.....	62	64	66	68	70	72	74	76	78	80	82	2 inches.
Total length ¹	38	39	40	41	42	43	44	45	46	47	48	2½ inches.
Width across bottom of leg.....	5½	5½	6	6	6½	6½	7	7	7½	7½	8	6 percent.
Armhole length.....	12	12	13	13	14	14	15	15	16	16	16	2 inches.
Collarette length ²	28	28	29	29	30	30	31	31	32	32	32	Do.

¹ Total lengths of athletic suits may vary according to style.² Collarette lengths may vary according to style.

PART VII. WOMEN'S GARMENTS—STANDARD MEASUREMENTS AND METHODS IN DETAIL

BLOOMERS—WOMEN'S RIBBED (1×1)

ELASTIC WAIST BAND, ELASTIC AT KNEE

METHOD OF MEASURING

174. *Total length*.—Measured from outside edge of waist band (unstretched) to bottom edge of leg. (From *A* to *B*, fig. 16.)

175. *Waist*.—Twice the distance measured between outside edges of waist band when elastic in waist band is not stretched. (Twice *A* to *C*, fig. 16.)

176. *Width across seat*.—Measured across back of garment halfway between bottom of crotch and top edge of waist band. (From *K* to *L*, fig. 16.)

177. *Width of leg bottom*.—Measured across leg at bottom edge when elastic is not stretched. (From *B* to *E*, fig. 16.)

178. *Front rise*.—Measured from bottom of crotch up front of garment to middle point of front edge of waist band. (From *D* to *G*, fig. 16.)

179. *Back rise*.—Measured from bottom of crotch up back of garment to middle point of back edge of waist band. (From *D* to *H*, fig. 16.)

180. *Width across crotch*.—Measured at widest point of fold after garment has been folded in half lengthwise. (From *F* to *J*, fig. 16.)

TABLE 74.—*Bloomers—Standard measurements for women's ribbed (1×1)—elastic waist band, elastic at knee*

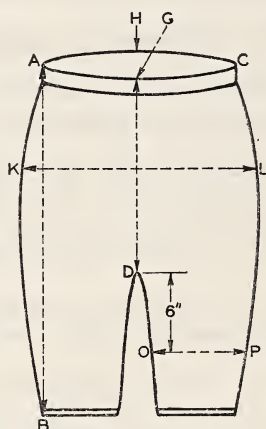
(U. I. W-13)

Location	Size (inches)									Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	
Total length.....	21	22	23	24	25	25½	26	26½	27	1 inch.
Waist.....	21	22	23	24	25	26	27	28	29	Do.
Width across seat.....	19	20	21	22	23	24	25	26	27	Do.
Width of leg bottom.....	5½	6	6	6½	7	7	7½	8	8	½ inch.
Front rise.....	13½	14	14½	15	15½	16	16¾	17½	18¼	¾ inch.
Back rise.....	15	15½	16	16½	17	17½	18¼	19	19¾	Do.
Width across crotch.....	10½	11	11½	12	12½	13	13½	14	14½	½ inch.

DRAWERS—WOMEN'S RIBBED (1×1) COTTON—KNEE LENGTH, TIGHT KNEE

METHOD OF MEASURING

181. *Total length.*—Measured from outside edge of waist band to bottom edge of leg. (From *A* to *B*, fig. 23.)

FIGURE 23.—*Drawers—women's ribbed (1×1) cotton, knee length, tight knee.*

182. *Waist.*—Twice the distance between the outside edges of waist band, when garment lies out smoothly. (Twice *A* to *C*, fig. 23.)

183. *Width across seat.*—Measured across back of garment half-way between bottom of crotch and top edge of waist band. (From *K* to *L* fig. 23.)

184. *Width of thigh.*—Measured across leg at point 6 inches below bottom of crotch. (From *O* to *P*, fig. 23.)

185. *Front rise.*—Measured from bottom of crotch up front of garment to middle point of front edge of waist band. (From *D* to *G*, fig. 23.)

186. *Back rise.*—Measured from bottom of crotch up back of garment to middle point of back edge of waist band. (From *D* to *H*, fig. 23.)

TABLE 75.—*Drawers—Standard measurements for women's ribbed (1×1) cotton—knee length, tight knee*

(U. I. W-12)

Location	Size (inches)											Tolerances (plus or minus)
	30	32	34	36	38	40	42	44	46	48	50	
Total length.....	26	26½	27	28	29	29½	30	30½	31	31½	32	1 inch.
Waist.....	26	28	30	31	32	34	36	38	40	41	43	Do.
Width across seat.....	15	16	17	18	19	20	20½	21	22	23	24	Do.
Width of thigh.....	7½	7½	8	8½	8½	9	9½	10	10	10½	11	6 percent.
Front rise.....	14	14½	15	15½	16½	17	17½	18	19	19	19½	¾ inch.
Back rise.....	16	16½	17	17½	18½	19	19½	20	21	21	21½	Do.

PAJAMAS, SLEEPING—WOMEN'S BALBRIGGAN

FLAT KNIT, TWO-PIECE, PULLOVER, SHORT SLEEVES OR SLEEVE-
LESS, ELASTIC IN WAIST BAND

METHOD OF MEASURING

PAJAMA BLOUSE.

187. *Width of garment*.—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 24.)

188. *Total length*.—Measured from point where shoulder joins collarette or neck opening to bottom edge of blouse. (From *A* to *B*, fig. 24.)

189. *Sleeve length*.—Measured from point where sleeve is attached to shoulder to upper outside edge of sleeve. (From *F* to *G*, fig. 24.)

190. *Armhole length*.—Measured from point where sleeve is attached to shoulder to lowest point under arm or for sleeveless garment measured from top of armhole at shoulder along outer edge of armhole to lowest point under arm. (From *F* to *N*, fig. 24.)

PAJAMA TROUSERS.

191. *Total length*.—Measured from outside edge of waist band to outside lower edge of leg. (From *A* to *B*, fig. 24.)

192. *Waist*.—Twice the distance measured between outside edges of waist band when elastic is not stretched. (Twice *A* to *C*, fig. 24.)

193. *Width across crotch*.—Measured at widest point of fold after garment has been folded in half lengthwise. (From *D* to *N*, fig. 24.)

194. *Width across leg bottom*.—Measured across leg along lower edge. (From *B* to *E*, fig. 24.)

195. *Front rise*.—Measured from bottom of crotch up front of garment to middle point of front edge of waist band. (From *D* to *G*, fig. 24.)

196. *Back rise*.—Measured from bottom of crotch up back of garment to middle point of back edge of waist band. (From *D* to *H*, fig. 24.)

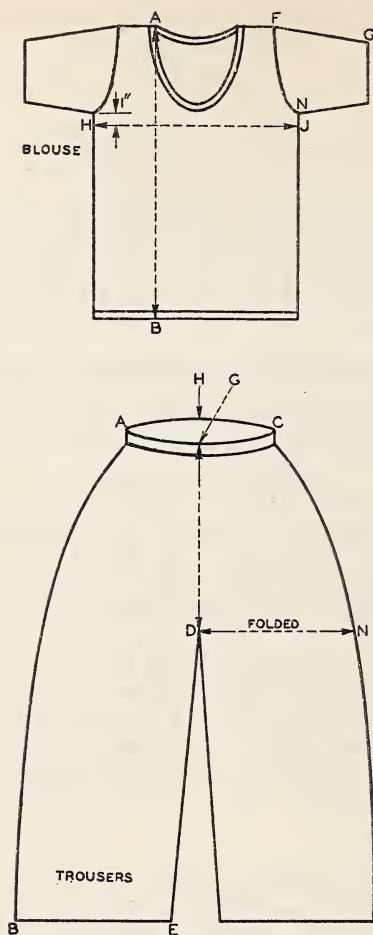


FIGURE 24.—Pajamas, Sleeping—women's balbriggan—flat knit, two-piece, pull-over, short sleeve or sleeveless, elastic in waist band.

TABLE 76.—Pajamas, Sleeping—Standard measurements for women's balbriggan—flat knit, two-piece, pullover, short sleeve or sleeveless, elastic in waist band

PAJAMA BLOUSE

(U. I. W-15)

Location	Size (numbers)				Tolerances (plus or minus)
	15	16	17	18	
	(Alternative marking)				
	34/36	38/40	42/44	46/48	
	(Alternative marking)				
	Small	Medium	Large	Ex. large	
Width of garment-----	16½	18½	20½	22½	6 percent.
Total length-----	23½	24½	25½	26½	1 inch.
Sleeve length, short ¹ -----	7½	7½	8½	8½	Do.
Armhole length (short sleeve)-----	8	8½	9	10	Do.
Armhole length (sleeveless)-----	9	10	11	12	2 inches.

¹ Sleeve lengths may vary according to style.

TABLE 77.—*Pajamas, Sleeping—Standard measurements for women's balbriggan—flat knit, two-piece, pullover, short sleeve or sleeveless, elastic in waist band*

PAJAMA TROUSERS

(U. I. W-15)

Location	Size (numbers)				Tolerances (plus or minus)
	15	16	17	18	
	(Alternative marking)				
	Small	Medium	Large	Ex. large	
Total length.....	39½	40½	41¼	42	1 inch.
Waist.....	24	26	28	31	Do.
Width across crotch.....	12½	13½	14½	15½	½ inch.
Width across leg bottom.....	12½	13½	14½	15½	Do.
Front rise.....	15	16	17	18	1 inch.
Back rise.....	17	18	19	20	Do.

PANTIES—WOMEN'S TUCK STITCH—KNEE LENGTH

METHOD OF MEASURING

197. *Total length.*—Measured from top outside edge of waistband to bottom edge of leg. (From *A* to *B*, fig. 17.)

198. *Waist.*—Twice the distance between outside edge of waist band when elastic in waist band is not stretched. (Twice *A* to *C*, fig. 17.)

199. *Width across seat.*—Measured across back of garment half way between bottom of crotch and top edge of back waist band. (From *K* to *L*, fig. 17.)

200. *Front rise.*—Measured from bottom of crotch up front of garment to middle point of front edge of waist band. (From *D* to *G*, fig. 17.)

201. *Back rise.*—Measured from bottom of crotch up back of garment to middle point of back edge of waist band. (From *D* to *H*, fig. 17.)

TABLE 78.—*Panties—Standard measurements for women's tuck stitch—knee length*

(U. I. W-14)

Location	Size (inches)								Tolerances (plus or minus)
	34 — 36		38 — 40		42 — 44		46 — 48		
	Small		Medium		Large		Extra large		
Total length ¹	19½	19½	20½	20½	21½	21½	24	24	1 inch.
Waist.....	18	18	19½	19½	21	21	23	23	Do.
Width across seat (all cuts).....	11½	11½	12½	12½	13½	13½	15	15	10 percent.
Front rise.....	12½	12½	13½	13½	14½	14½	16	16	1 inch.
Back rise.....	14	14	15	15	16	16	17½	17½	Do.

¹ Total length may vary according to style.

TABLE 79.—*Shoulder Straps—Standard practice of spacing on women's bodice top union suits and vests*

(U. I. W-11)

Location	Size (inches)									Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	
Front spacing between strap ends. ¹	7	7¼	7½	7¾	8	8¼	8½	8¾	9	½ inch.
Back spacing between strap ends. ¹	6	6¼	6½	6¾	7	7¼	7½	7¾	8	Do.
Strap length.....	14	14½	15	15½	16	16½	17	17½	18	Do.

¹ Spacing between ends of straps on front and back of garment is measured from inside edge of 1 strap to inside edge of the other strap. This measurement is taken after the garment is brought to the chest size.

TABLE 80.—*Union Suits—Standard measurements for women's ribbed (1×1) cotton—dutch neck, elbow sleeve, ankle length, button front*

(U. I. W-3)

Method of measuring, paragraphs 52-61

Location	Size (inches)									Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	
Width of garment:										
7, 8, 9, 10 cut.....	13½	14¼	15	15¾	16½	17¼	18	18¾	19½	6 percent.
11, 12, 14 cut.....	13	13¾	14½	15¼	15¾	16½	17¼	18	18½	Do.
Trunk.....	62	64	66	68	70	72	74	76	78	2 inches.
Total length.....	53	54	55	56	57	58	59	60	61	2½ inches.
Width of leg:										
7, 8, 9, 10 cut.....	6¾	7½	7½	7¾	8¼	8½	9	9¾	9¾	1 inch.
11, 12, 14 cut.....	6½	6¾	7¼	7¾	7¾	8¼	8½	9	9¾	Do.
Sleeve length ¹	10	10	10	10	11	11	11	11	11	Do.
Armhole length.....	8	8½	9	9½	9½	10	10½	10½	11	Do.
Leg cuff length (if cuff is used).....	6	6	6	6	6	6	6	6	6	Maximum.
Sleeve cuff length (if cuff is used).....	5½	5½	5½	5½	5½	5½	5½	5½	5½	Do.
Neck opening (dutch neck).....	26	26	27	28	28	29	30	30	31	2 inches.
Waist:										
7, 8, 9, 10 cut.....	23	24	25½	27	28	29½	31	32	33½	6 percent.
11, 12, 14 cut.....	22½	23½	25	26½	27½	29	30½	31½	33	Do.

¹ Elbow sleeve lengths may vary according to style.

TABLE 81.—*Union Suits—Standard measurements for women's ribbed (1×1) cotton—high neck, long sleeve, ankle length*

(U. I. W-1)

Method of measuring, paragraphs 52-61

Location	Size (inches)									Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	
Width of garment:										
7, 8, 9, 10 cut.....	13½	14¼	15	15¾	16½	17¼	18	18¾	19½	6 percent.
11, 12, 14 cut.....	13	13¾	14½	15¼	15¾	16½	17¼	18	18½	Do.
Trunk.....	62	64	66	68	70	72	74	76	78	2 inches.
Total length.....	53	54	55	56	57	58	59	60	61	2½ inches.
Width of leg:										
7, 8, 9, 10 cut.....	6¾	7½	7½	7¾	8¼	8½	9	9¾	9¾	1 inch.
11, 12, 14 cut.....	6½	6¾	7¼	7¾	7¾	8¼	8½	9	9¾	Do.
Sleeve length.....	20	20	21	21	21	22	22	22	22	Do.
Armhole length.....	8	8½	9	9½	9½	10	10½	10½	11	Do.
Leg cuff length (if cuff is used).....	6	6	6	6	6	6	6	6	6	Maximum.
Sleeve cuff length (if cuff is used).....	5½	5½	5½	5½	5½	5½	5½	5½	5½	Do.
Neck opening (high neck).....	18	18	19	19	20	20	20	20	21	1 inch.
Waist:										
7, 8, 9, 10 cut.....	23	24	25½	27	28	29½	31	32	33½	6 percent.
11, 12, 14 cut.....	22½	23½	25	26½	27½	29	30½	31½	33	Do.

TABLE 82.—*Union Suits—Standard measurements for women's ribbed (1×1) cotton—low neck, no sleeves, knee length, built-up shoulder, tight knee*

(U. I. W-5)

Method of measuring, paragraphs 62-67

Location	Size (inches)									Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	
Width of garment:										
7, 8, 9, 10 cut.....	12½	13¼	14	14¾	15½	16¼	17	17½	18	6 percent.
11, 12, 14 cut.....	11½	12¼	13	13¾	14½	15¼	16	16½	17	Do.
Trunk.....	62	64	66	68	70	72	74	76	78	2 inches.
Total length ¹	40	41	42	43	44	45	46	47	48	1½ inches.
Armhole length.....	9½	10	10	10½	10½	11	11½	11½	12	1 inch.
Neck opening (low neck).....	40	42	43	44	45½	47	48½	50	51½	2 inches.
Waist:										
7, 8, 9, 10 cut.....	21½	22½	24	25½	26½	28	29½	30½	32	6 percent.
11, 12, 14 cut.....	21	22	23½	25	26	27½	29	30	31½	Do.

¹ Total length of trunk and sport leg models according to style. Tolerance ± 1½ inches.

TABLE 83.—*Union Suits—Standard measurements for women's ribbed (1×1) cotton—medium weight, dutch neck, elbow sleeve, knee length*

(U. I. W-4)

Method of measuring, paragraphs 68-75

Location	Size (inches)									Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	
Width of garment:										
7, 8, 9, 10 cut.....	13½	14¼	15	15¾	16½	17¼	18	18¾	19½	6 percent.
11, 12, 14 cut.....	13	13¾	14½	15¼	15¾	16½	17¼	18	18½	Do.
Trunk.....	62	64	66	68	70	72	74	76	78	2 inches.
Total length ¹	40	41	42	43	44	45	46	47	48	1½ inches.
Sleeve length.....	10	10	10	10	11	11	11	11	11	1 inch.
Armhole length.....	8	8½	9	9½	9½	10	10½	10½	11	Do.
Sleeve cuff length (if cuff is used).....	5½	5½	5½	5½	5½	5½	5½	5½	5½	Maximum.
Neck opening.....	26	26	27	28	28	29	30	30	31	2 inches.
Waist:										
7, 8, 9, 10 cut.....	23	24	25½	27	28	29½	31	32	33½	6 percent.
11, 12, 14 cut.....	22½	23½	25	26½	27½	29	30½	31½	33	Do.

¹ Total length of knee length suits may vary according to style.

TABLE 84.—*Union Suits—Standard measurements for women's ribbed (1×1) worsted, worsted-merino, wool and wool-cotton—high neck, long sleeve, ankle length*

[Made from fabric that has been washed in the roll and then cut and seamed]

(U. I. W-2)

Method of measuring, paragraphs 52-61

Location	Size (inches)									Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	
Width of garment:										
7, 8, 9, 10 cut.....	13½	14¼	15	15¾	16½	17¼	18	18¾	19½	6 percent.
11, 12, 14 cut.....	13	13¾	14½	15¼	15¾	16½	17¼	18	18½	Do.
Trunk.....	62	64	66	68	70	72	74	76	78	2 inches.
Total length.....	53	54	55	56	57	58	59	60	61	2½ inches.
Width of leg:										
7, 8, 9, 10 cut.....	6¾	7½	7½	7¾	8¼	8¾	9	9¾	9¾	1 inch.
11, 12, 14 cut.....	6½	6¾	7¼	7½	7¾	8¼	8¾	9	9¼	Do.
Sleeve length.....	20	20	21	21	21	22	22	22	22	Do.
Armhole length.....	8	8½	9	9½	9½	10	10½	10½	11	Do.
Leg cuff length (if cuff is used).....	6	6	6	6	6	6	6	6	6	Maximum.
Sleeve cuff length (if cuff is used).....	5½	5½	5½	5½	5½	5½	5½	5½	5½	Do.
Neck opening (high neck).....	18	18	19	19	19	20	20	20	21	1 inch.
Waist:										
7, 8, 9, 10 cut.....	23	24	25½	27	28	29½	31	32	33½	6 percent.
11, 12, 14 cut.....	22½	23½	25	26½	27½	29	30½	31½	33	Do.

UNION SUITS—WOMEN'S TUCK STITCH—KNEE LENGTH

METHOD OF MEASURING

202. *Width of garment at waist line* (1×1 rib portion).—Measured across garment at narrowest part of body of garment. (From *H* to *J*, fig. 18.)

203. *Trunk*.—Twice the distance measured from point where shoulder joins neck opening to center of bottom line of crotch. Spread legs in measuring only sufficiently to adjust crotch. (Twice *A* to *D*, fig. 18.)

204. *Total length*.—Measured from point where shoulder joins neck opening to bottom edge of leg. (From *A* to *B*, fig. 18.)

205. *Armhole length*.—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm. (One-half length of armhole band.) (From *F* to *N*, fig. 18.)

206. *Neck opening*.—Measured from point where shoulder joins neck opening around inner edge of neck opening back to starting point or twice the distance across aperture of neck opening secured by grasping opposite sides of neck opening and bringing the two opposite edges parallel.

207. *Length of leg opening (closed crotch style only)*.—Measured from top point of opening to bottom of opening.

TABLE 85.—Union Suits—Standard measurements for women's tuck stitch—knee length

(U. I. W-6)

Location	Size (inches)								Tolerances (plus or minus)
	34 — 36		38 — 40		42 — 44		46 — 48		
	Small		Medium		Large		Extra large		
Width of garment at waist line (1×1 rib portion) all cuts.....	8½	8½	9½	9½	10½	10½	12	12	10 percent.
Trunk:									
Closed crotch, leg opening style.....	60	60	64	64	68	68	72	72	2 inches.
Open seat style.....	63	63	67	67	71	71	75	75	Do.
Total length ¹	36½	36½	38½	38½	40½	40½	42½	42½	Do.
Armhole length.....	10	10	11	11	12	12	13	13	1 inch.
Neck opening.....	41	41	44	44	47	47	50	50	2 inches.
Length of leg opening:									
Closed crotch style only.....	13½	13½	14½	14½	15½	15½	17	17	Do.

¹ Total lengths may vary according to style.

VESTS—WOMEN'S RIBBED (1×1) COTTON SHAPED

LOW NECK, NO SLEEVES, BUILT-UP SHOULDER

METHOD OF MEASURING

208. *Width of garment*.—Measured across garment 1 inch below bottom of armholes. (From *H* to *J*, fig. 25.)

209. *Waist*.—Twice the distance measured across garment at the narrowest part of the body of the garment. (Twice *S* to *T*, fig. 25.)

210. *Total length*.—Measured from top edge of shoulder strap to bottom edge of vest. (From *A* to *B*, fig. 25.)

TABLE 88.—*Vests—Standard measurements for women's swiss rib straight—light weight, low neck, no sleeves, built-up shoulder*

(U. I. W-9)

Method of measuring, paragraphs 76-79

Location	Size (inches)									Tolerances (plus or minus)
	34	36	38	40	42	44	46	48	50	
Width of garment:										
12 cut.....	9	9	10	10	11	11	12	12	13	10 percent.
14 cut.....	8	8	9	9	10	10	11	11	12	Do.
Total length.....	32	33	34	35	36	37	38	39	40	1 inch.
Armhole length.....	10	10	10	11	11	11	12	12	12	2 inches.
Neck opening length.....	39½	41	42½	44	45½	47	48½	50	51½	Do.

VESTS—WOMEN'S TUCK STITCH

LOW NECK, NO SLEEVES, BUILT-UP SHOULDER

METHOD OF MEASURING

213. *Width of garment at waistline* (1×1 rib portion).—Measured across garment at narrowest part of body of garment. (From *H* to *J*, fig. 20.)

214. *Total length*.—Measured from top edge of shoulder strap to bottom edge of vest. (From *A* to *B*, fig. 20.)

215. *Armhole length*.—Measured from top point of armhole at shoulder along outer edge of armhole to lowest point under arm. (One-half length of armhole band). (From *F* to *N*, fig. 20.)

216. *Neck opening*.—Measured from point where shoulder joins neck opening around inner edge of neck opening back to starting point or twice the distance across aperture of neck opening secured by grasping opposite sides of neck opening and bringing the two opposite edges parallel.

TABLE 89.—*Vests—Standard measurements for women's tuck stitch—low neck, no sleeves, built-up shoulder*

(U. I. W-10)

Location	Size (inches)								Tolerances (plus or minus)
	34—36		38—40		42—44		46—48		
	Small		Medium		Large		Extra large		
Width of garment at waist line (1 × 1 rib portion) all cuts.....	8	8	9	9	10	10	11½	11½	10 per cent.
Total length.....	28	28	30	30	32	32	34	34	1 inch.
Armhole length.....	10	10	11	11	12	12	13	13	Do.
Neck opening.....	41	41	44	44	47	47	50	50	2 inches.

LABELING

217. In order that consumers may become familiar with the significance of standard measurements, it is recommended that knit underwear manufactured to conform to such standards be identified

by a tag or other label attached to the garment and carrying the following statement:

This garment is GUARANTEED
by the manufacturer to be FULL
SIZE in accordance with Com-
mercial Standard CS33-43 as
issued by the National Bureau
of Standards of the U. S.
Department of Commerce.

or more briefly

FULL SIZE

Conforming to CS33-43.

RECOMMENDED SYMBOLS FOR DESIGNATING DIFFERENT MODELS

218. The following is a proposed system of standard symbols for designating different models or types of knit underwear to be used in marking underwear boxes. Symbols other than those proposed can be added from time to time as necessity arises.

219. Symbols always shall be given in the order of the groups as numbered. Thus neck symbols shall come first, sleeve second, length third, etc. The last group shall describe the class of garment other than regular. This may be the same as the manufacturers are using and should preferably be spelled out to avoid confusion. Symbols from each group, used in describing a garment, shall be separated by a comma, viz: HN, NS, AL/Stout. If more than one symbol from the same group is used in describing a garment, then they shall be used in the order that they are listed in each group, the first coming first, the second, second, and so on, the two or more symbols so used from the same group not being separated by comma—for example, DN, NS, KL, SLWK (dutch neck, no sleeve, knee length, shell leg, wide knee).

1. Neck:

HN.....High neck.
LN.....Low neck.
DN.....Dutch neck.
VN.....V neck.
RN.....Round neck.
TN.....Tubular neck.
AN.....Athletic neck.

2. Sleeve:

LS.....Long sleeve.
SS.....Short sleeve.
NS.....No sleeve.
ES.....Elbow sleeve.
WS.....Wing sleeve.

3. Total length:

AL.....Ankle length.
KL.....Knee length.
3/4L.....3/4-length.
1/4L.....Trunk length.

4. Leg types:

SL.....Shell leg.
WL.....Wide leg.
WSL.....Wide shell leg.
TK.....Tight knee.
WK.....Wide knee.

5. Finish:

CF.....Crochet finish.
TF.....Tubular finish.
BT.....Bodice top.
EN.....Envelope.

6. Gussets:

OG.....Open gusset.
CG.....Closed gusset.
DS.....Drop seat.
OS.....Open seat.
CC.....Closed crotch.

7:

/Stout.
/Slim.
/For short men.
/Short.
/Stub.
/Athletic.
/Slender.
/Tall.

RECOMMENDED UNDERWEAR BOX SIZES

(Outside Measurements in Inches)

220. 16 by 9¼, for men's ribbed union suits.
 17 by 10½, for men's heavy fleeced suits and fleeced shirts and drawers.
 12½ by 9¼, for boys' and children's ribbed union suits.
 14½ by 9¼, for boys' fleeced union suits and shirts and drawers.
 13 by 8½, for boys' fleeced union suits and shirts and drawers.

RECOMMENDED CONE COLORS FOR SINGLE COTTON YARNS

221. The following is a proposed system of designating single cotton yarn sizes by the colors of the cones upon which they are wound. Some knitting mills and some yarn mills have already adopted individual color codes and, in order to avoid further confusion, this code has been adopted by the Underwear Institute as a guide for mills wishing to standardize in this way.

Color of cone	Yarn sizes			
Gray.....	6s	12s	24s	70s
Drab.....	6. 5s	13s	26s	
Dark green.....	7s	14s	28s	
Red.....	7. 5s	15s	30s	60s
Blue.....	8s	16s	32s	
Light green.....	8. 5s	17s	34s	
Orange.....	9s	18s	36s	
Black.....	9. 5s	19s	38s	
Brown.....	10s	20s	40s	80s
Purple.....	10. 5s			
Yellow.....	11s	22s		
Pink.....			50s	100s

RECOMMENDED METHOD OF WASHING KNIT WOOL AND WOOL-COTTON UNDERWEAR

222. *Washing*.—Use only a mild soap that is free from excess alkali. If the soap is in powdered or chip form, dissolve it first in hot water. Do not rub bar soap directly on the garment, but cut thin slices of it and dissolve as for chip or powdered soap. Soak the garment for about one-half hour in warm water (about 100° F) with enough of the soap solution to give a good suds and then change to a clean bath of suds. Then press or squeeze the suds through the soiled spots until clean. Avoid rubbing garment on the washboard or between the hands, as this is a sure way to shrink woolen underwear.

223. *Rinsing*.—Rinse garment in clean warm water of approximately the same temperature as the washing solutions until all soap and dirt have been removed. Run through a wringer, using only light pressure on the rolls. Lay the garment on a flat surface (or whenever possible on a form) and stretch back to the original shape and size. Then hang it up by the top in a warm room or out of doors if the weather is warm and dry. Do not hang the garment out in freezing weather when drying.

224. Avoid sharp contrasts in temperatures while washing, rinsing, and drying. Dry slowly.

225. Remember not to boil or rub goods in washing and rinsing, as this causes shrinkage.

226. The use of soft water increases the efficiency of the soap. If the water is hard, soften first by adding borax.

EFFECTIVE DATE

The standard is effective for new production from July 30, 1943.

STANDING COMMITTEE

The following individuals comprise the membership of the standing committee, which is to review, prior to circulation for acceptance, revisions proposed to keep the standard abreast of progress. Comment concerning the standard and suggestions for revision, may be addressed to any member of the committee or to the Division of Trade Standards, National Bureau of Standards, which acts as secretary for the committee:

Manufacturers:

ROY A. CHENEY (chairman), Underwear Institute, Room 1219, 2 Park Avenue, New York (16), N. Y.

RALPH M. JONES, Utica Knitting Co., Utica, N. Y.

E. C. WILSON, Munsingwear, Inc., Minneapolis, Minn.

Distributors:

GERALD GROSNER, Grosner of Washington, 1325 F Street, NW., Washington (25), D. C., Representing National Association of Retail Clothiers and Furnishers.

L. P. BURKLAND, Burkland & Gaede, 300 W. Adams St., Chicago, Ill., Representing Wholesale Dry Goods Institute.

T. L. BLANKE, National Retail Dry Goods Association, 101 W. 31 st. St. New York (1), N. Y.

Consumers:

CLARICE L. SCOTT, Research Center, Beltsville, Md., Representing American Home Economics Association.

MRS. MARGARET H. KINGSBURY, Purchasing Office, Department of Interior, Washington (25), D. C.

MRS. CHARLOTTE PAYNE, 501 Madison Ave., New York, N. Y., Representing National Council of Women of the United States, Inc.

HISTORY OF PROJECT

Around 1920-22 the Associated Knit Underwear Manufacturers of America, feeling that the interest of the consumer is the first consideration of the manufacturer, and in view of the desire to be of service to the consumer, as well as the jobber and the retailer, began work on the collection of data looking toward the standardization of methods of measuring, measurements, and tolerances for knit underwear.

In order to get effective service in developing the technical and scientific details incident to the standardization project, C. H. Hamlin, a research associate representing the Associated Knit Underwear Manufacturers of America, was detailed to the National Bureau of Standards, Washington, D. C. Mr. Hamlin began his duties on July 26, 1923, and for 7½ years collected and tabulated essential data cover-

ing the measurements, tolerances, and method of measuring all types of knit underwear in an effort to set up standard specifications for these garments that would be acceptable to all classes of the industry.

On December 31, 1930, the Associated Knit Underwear Manufacturers of America, conscious of the fact that the data assembled were sufficiently accurate to be used by all manufacturers as a specification in the manufacture of knit underwear, requested the cooperation of the National Bureau of Standards in the establishment of a commercial standard.

On February 19, 1931, a general conference, composed of manufacturers, distributors, and organized users of knit underwear, was held at the National Bureau of Standards in Washington, D. C. Comments, criticisms, and suggestions were invited, with the result that the conference voted that the measurements, tolerances, and other data relative to knit rayon underwear be omitted from the knit underwear standard and that the title for the standard be changed to read "Knit Underwear (Exclusive of Rayon)."

On June 18, 1931, a circular letter to the trade announced the success of the project and promulgated the standard as Commercial Standard CS33-32, effective for new production from January 1, 1932.

FIRST REVISION

On March 3, 1942, the Underwear Institute requested that this commercial standard be revised to include 30 additional garments, the measurements of which have been in general use over a period of years. Agreeable to this request, copies of the proposed additions, together with suggested minor changes in the original draft, were approved by a majority of the standing committee and circulated on December 7, 1942 to manufacturers, distributors, and consumers for written acceptance. The recommended revision was subsequently accepted and approved for promulgation by the United States Department of Commerce, as Knit Underwear (Exclusive of Rayon), Commercial Standard CS33-43. An announcement was issued on June 30, 1943, that the revised standard would become effective for new production from July 30, 1943.

ACCEPTANCE OF COMMERCIAL STANDARD

If acceptance has not previously been filed, this sheet properly filled in, signed, and returned will provide for the recording of your organization as an acceptor of this commercial standard.

Date _____

Division of Trade Standards,
National Bureau of Standards,
Washington, D. C.

Gentlemen:

Having considered the statements on the reverse side of this sheet, we accept the Commercial Standard CS33-43 as our standard of practice in the

Production ¹ Distribution ¹ Use ¹ Testing ¹

of knit underwear (exclusive of rayon).

We will assist in securing its general recognition and use and will cooperate with the standing committee to effect revisions of the standard when necessary.

Signature of individual officer _____
(In ink)

(Kindly typewrite or print the following lines)

Name and title of above officer _____

Organization _____
(Fill in exactly as it should be listed)

Street address _____

City and State _____

¹ Please designate which group you represent by drawing lines through the other three. Please file separate acceptances for all subsidiary companies and affiliates which should be listed separately as acceptors. In the case of related interests, trade papers, colleges, etc., desiring to record their general approval, the words "in principle" should be added after the signature.

TO THE ACCEPTOR

The following statements answer the usual questions arising in connection with the acceptance and its significance:

1. *Enforcement.*—Commercial standards are commodity specifications voluntarily established by mutual consent of those concerned. They present a common basis of understanding between the producer, distributor, and consumer and should not be confused with any plan of governmental regulation or control. The United States Department of Commerce has no regulatory power in the enforcement of their provisions, but since they represent the will of the interested groups as a whole, their provisions through usage soon become established as trade customs, and are made effective through incorporation into sales contracts by means of labels, invoices and the like.

2. *The acceptor's responsibility.*—The purpose of commercial standards is to establish for specific commodities, nationally recognized grades or consumer criteria and the benefits therefrom will be measurable in direct proportion to their general recognition and actual use. Instances will occur when it may be necessary to deviate from the standard and the signing of an acceptance does not preclude such departures; however, such signature indicates an intention to follow the commercial standard where practicable, in the production, distribution, or consumption of the article in question.

3. *The Department's responsibility.*—The major function performed by the Department of Commerce in the voluntary establishment of commercial standards on a Nation-wide basis is fourfold: first, to act as an unbiased coordinator to bring all interested parties together for the mutually satisfactory adjustment of trade standards; second, to supply such assistance and advice as past experience with similar programs may suggest; third, to canvass and record the extent of acceptance and adherence to the standard on the part of producers, distributors, and users; and fourth, after acceptance, to publish and promulgate the standard for the information and guidance of buyers and sellers of the commodity.

4. *Announcement and promulgation.*—When the standard has been endorsed by a satisfactory majority of production or consumption in the absence of active, valid opposition, the success of the project is announced. If, however, in the opinion of the standing committee or the Department of Commerce, the support of any standard is inadequate, the right is reserved to withhold promulgation and publication.

ACCEPTORS

The organizations and individuals listed below have accepted these methods of measuring and measurements as their standard of practice in the production, distribution, and use of knit underwear (exclusive of rayon). Such endorsement does not signify that they may not find it necessary to deviate from the standard, nor that producers so listed guarantee all of their products in this field to conform with the requirements of this standard. Therefore, specific evidence of conformity should be obtained where required.

ASSOCIATIONS

National Council of Women of the United States, New York, N. Y. (In principle.)
National Retail Dry Goods Association, New York, N. Y.
Underwear Institute, New York, N. Y.
Wholesale Dry Goods Institute, Inc., The, New York, N. Y.

FIRMS

Abraham & Straus, Inc., Brooklyn, N. Y.
Arkwright Merchandise Corporation, New York, N. Y.
Ashland Knitting Mills, Ashland, Pa.
Askin Bros. Co., Baltimore, Md.
Atlas Underwear Co., The, Piqua, Ohio.
B & B Stores, Inc., Logansport, Ind.
Bailey Knitting Mills, The, Fort Plain, N. Y.
Ball & Giles, Inc., Troy, N. Y.
Bassett-Walker Knitting Co., Inc., Bassett, Va.
Bestok Underwear Co., Williamstown, Pa.
Better Fabrics Testing Bureau, New York, N. Y.
Bisom Co., New York, N. Y.
Bittner-Hunsicker & Co., Allentown, Pa.
Blossom Products Corporation, Allentown, Pa.
Boston Knitting Mills, Inc., Newton, Mass.
Boston Store, Inc., The, Colorado Springs, Colo.
Bradley & Co., W. W., Delavan, Wis.
Brown Durrell Co., Boston, Mass.
Brown Knitting Co., New York, N. Y.
Bryson Co., A., Ware, Mass.
Burkey Underwear Co., Inc., Hamburg, Pa.
Burkland & Gaede, Chicago, Ill.
Butler Brothers, Chicago, Ill.
California, University of, Agricultural Extension Service, Berkeley, Calif.
Capwell Co., H. C., Oakland, Calif.
Carter Co., The William, Needham Heights, Mass.
Cassidy Greene & Co., New York, N. Y.
Chalmers Knitting Co., Amsterdam, N. Y.
Chicago Mail Order Co., Chicago, Ill.
Cluett, Peabody & Co., Inc., Troy, N. Y.
Consumers Testing Laboratories, Philadelphia, Pa.
Consumers Union of the U. S., Inc., New York, N. Y.
Cooper's, Inc., Kenosha, Wis.
Coppin Co., The John R., Covington, Ky.
Denton Sleeping Garment Mills, Inc., Centreville, Mich.
Duofold, Inc., Mohawk, N. Y.
E-Z Mills, Inc., New York, N. Y.
E-Cut Knitting Mills, Royersford, Pa.
Earnshaw Knitting Co., Newton, Mass.
Elliott Manufacturing Co., Manchester, N. H.
Elmira Knitting Mills, Elmira Heights, N. Y.
(Excelsior)-Varsity Underwear Corporation, New York, N. Y.
Faith Mills, Inc., Averill Park, N. Y.
Fandel Co., St. Cloud, Minn.
Fessler Knitting Co., H. H., Orwigsburg, Pa.
Fort Schuyler Knitting Co., Utica, N. Y.
Fuld & Hatch Knitting Co., Cohoes, N. Y.
Gantner & Mattern Co., San Francisco, Calif.
Geissler Knitting Mill, Hazleton, Pa.
Gibbs Underwear Co., Philadelphia, Pa.
Gilbert Knitting Co., Inc., Little Falls, N. Y.
Giles & Hirsch, Inc., New York, N. Y.
Globe Knitting Works, Grand Rapids, Mich.
Globe Underwear Co., Shoemakersville, Pa.
Gluxtex Corporation, New York, N. Y.
Goldheim's, Washington, D. C.

- Goodenow Textiles Co., Kansas City, Mo.
 Greenhill & Daniel, Inc., New York, N. Y.
 Griffin Knitting Mills, Inc., Griffin, Ga.
 Grosner of Washington, Washington, D. C.
 Gutmann & Co., Carl, New York, N. Y.
 Hanes Knitting Co., P. H., Winston-Salem, N. C.
 Hatch Textile Research, New York, N. Y.
 Hearn Department Stores, Inc., New York, N. Y.
 Heine Knitting Mill, C. H., Girardville, Pa.
 Henderson & Ervin, Charlottesville, Va. (In principle.)
 Hill Co., Web, Rapid City, S. Dak.
 Holmes Co., Ltd., D. H., New Orleans, La.
 Horne Co., Joseph, Pittsburgh, Pa.
 Hornik & Co., M., Charleston, S. C.
 Ilena Mills, Inc., Chattanooga, Tenn.
 Industrial By-Products & Research Corporation, Philadelphia, Pa.
 Iris Knitting Corporation, Pottstown, Pa.
 Johnstown Knitting Mill Co., Inc., The, Johnstown, N. Y.
 Joslin Co., F. N., Malden, Mass.
 Kahn Department Stores, Inc., Oakland, Calif.
 Kain Murphey Corporation, Chattanooga, Tenn.
 Keller's Department Store, Liberty, N. Y.
 Kennedy Knitting Co., Inc., Cohoes, N. Y.
 King & Co., Robert C., New York, N. Y.
 Kingsley, Ralph D., New York, N. Y.
 Kommel & Sons, A., New York, N. Y.
 Kooltex Knitting Mills, Inc., Mifflinburg, Pa.
 Kuehnert & Co., A., New York, N. Y.
 Kugelman's, Woodsville, N. H.
 Lastlong Underwear Co., Oswego, N. Y.
 Lewis Knitting Co., Janesville, Wis.
 Lincoln Underwear Mills, Inc., Pottstown, Pa.
 Little Falls Manufacturing Co., Little Falls, N. Y.
 Lord & Taylor, New York, N. Y.
 Macy & Co., Inc., R. H., New York, N. Y.
 Malone Knitting Co., Springfield, Mass.
 Marting Bros. Co., The, Portsmouth, Ohio.
 McLoughlin Manufacturing Co., Indianapolis, Ind.
 Medicott Co., The, Windsor Locks, Conn.
 Merit Underwear Co., Shoemakersville, Pa.
 Minneapolis Knitting Works, Minneapolis, Minn.
 Mount Airy Knitting Co., Mount Airy, N. C.
 Moyer, Walter W., Ephrata, Pa.
 Munsingwear, Inc., Minneapolis, Minn.
 Namm Store, The, Brooklyn, N. Y.
 National Bellas Hess, New York, N. Y.
 Nazareth Waist Co., Nazareth, Pa.
 New England Knitting Co., Winsted, Conn.
 New Orleans, Inc., Better Business Bureau of, New Orleans, La. (In principle.)
 Ogden Utah Knitting Co., Ogden, Utah.
 Olwin Angell Department Store, Aberdeen, S. Dak.
 Oneita Knitting Mills, Utica, N. Y.
 Pannill Knitting Co., Inc., Martinsville, Va.
 Parsons & Baker Co., The, Phoenixville, Pa.
 Penney Co., Inc., J. C., New York, N. Y.
 Perkiomen Knitting Mills, E. Greenville, Pa.
 Perry Knitting Co., The, Perry, N. Y.
 Port Leyden Knitting Co., Port Leyden, N. Y.
 Pottstown Knitting Mills, Inc., Pottstown, Pa.
 R & J Underwear Co., Inc., New London, Conn. (In principle.)
 Reidler Knitting Mill, Hazleton, Pa.
 Rems & Sons, John, Macungie, Lehigh County, Pa.
 Rice-Stix Dry Goods Co., St. Louis, Mo.
 Rifkin & Sons, William, Philadelphia, Pa.
 Rike-Kunler Co., The, Dayton, Ohio.
 Rivoli Mills, The, Chattanooga, Tenn.
 Roanoke Mills, Inc., Roanoke, Va.
 Robinhold & Co., Port Clinton, Pa.
 Rogow & Sons, Inc., Jos., Pittsburgh, Pa. (In principle.)
 Rohrer Knitting Mill, Orwigsburg, Pa.
 Root & McBride Co., The, Cleveland, Ohio.
 Rubens & Marble, Inc., Chicago, Ill.
 Sacramento, Better Business Bureau of, Sacramento, Calif. (In principle.)
 Sale Knitting Co., Inc., Martinsville, Va.
 Salt Lake Knitting Works, Salt Lake City, Utah.
 Schudson, Inc., Chas., Milwaukee, Wis.
 Scott & Williams, Inc., New York, N. Y.
 Scowcroft & Sons Co., John, Ogden, Utah.
 Sears, Roebuck & Co., Chicago, Ill.
 Semel & Co., Inc., J. H., New York, N. Y.
 Sexton Manufacturing Co., Fairfield, Ill.
 Shaughnessy Corporation, Watertown, N. Y.
 Signal Knitting Mills, Chattanooga, Tenn.
 Sing Sing Prison Industries, Ossining, N. Y.
 Smith Co., Timothy, Boston, Mass.

South Dakota State College, Brookings, S. Dak. (In principle.)	Walters Organ, Inc., Edgar B., New York, N. Y.
Spring City Knitting Co., Spring City, Pa.	Ware Knitters, Inc., Ware, Mass.
Stratford Knitting Mills, Inc., Linfield, Pa.	Waterville Textile Mills, Inc., Waterville, N. Y.
Strauss & Co., Levi, San Francisco, Calif.	Waynesboro Knitting Co., Waynesboro, Pa.
Superior, Inc., Piqua, Ohio.	West Knitting Corporation, Wadesboro, N. C.
Taylor-Bramley Co., The, Chicopee Falls, Mass.	White House Department Store, The, Tucson, Ariz.
Texas State College for Women, Denton, Tex. (In principle.)	Williams Bros. Manufacturing Co., Rome, N. Y.
Union Knitting Mills, Inc., Schuylkill Haven, Pa.	Wilson Bros., Chicago, Ill.
Utica Knitting Co., Utica, N. Y.	Winship-Boit Co., Wakefield, Mass.
Van Raalte Co., Inc., New York, N. Y.	Wolf-Brown-Jones Corporation, New York, N. Y.
Vassar Co., Chicago, Ill.	Woodward & Lothrop, Washington, D. C.
Vermont State Hospital for Insane, Waterbury, Vt.	Wright's Underwear Co., Inc., New York, N. Y.
Virginia Penitentiary, Industrial Department, Richmond, 19, Va.	
Virginia Underwear Corporation, Martinsville, Va.	
Vogue Knitting Co., Inc., Womelsdorf, Pa.	
Walser Manufacturing Co., Inc., The, Clifton, N. J.	

U. S. GOVERNMENT

Agriculture, U. S. Department of, Washington, D. C.
 Foreign & Domestic Commerce, Bureau of, Washington, D. C. (In principle.)
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